State of North Carolina Department of Health and Human Services

Division of Medical Assistance

North Carolina State Medicaid
Health Information Technology Plan

Submitted by:

NC DHHS Division of Medical Assistance
Dr. Robin Cummings, Director
Rachael Williams, Medicaid HIT Program Manager
rachael.williams@dhhs.nc.gov; 919-814-0184

May 6, 2014 - Version 4.0

CMS Comments Addressed

The following is provided in response to the August 14, 2013 CMS conditional approval letter.

SMHP Amendment Per the Stage 2 Final Rule Page#	CMS Comment	Description/Response/Clarification
Page 3 of 14	'Medicaid-enrolled encounters': the state indicates that "for program year 2013 it will allow the patient volume numerator to include any service rendered on any one day to a Medicaid enrolled individual regardless of payment liability." This change is for 2013 and beyond so CMS requests that the state ensure that this is understood.	NC acknowledges this change is for 2013 and beyond. This is accurately reflected throughout this SMHP.
Page 4 of 14	CMS reminds the state to include in its next update, a redline copy SMHP that represents the screenshots for changes to NC-MIPS as well as those for the other screen shots that have not been currently included in the amended SMHP, but that the state has attested it will update/include at a later time.	The screenshots reflecting the Stage 1 Changes per the Stage 2 Final Rule have been developed and can be found in Appendix 6 starting on page 232.
Page 5 of 15	"Patient volume": the reference to the screen shot (figure 5) does not show any radio button for selection of either prior calendar year or 12 months immediately preceding but the last paragraph on page 4 indicates that measure change screen shots are not available: this seems somewhat contradictory. The same with the "Exemption from Hospital-based exclusions for EPs" notes: there does not appear to be any radio button displayed on the screen shot (figure 4) that inquires if the EP is hospital based and funded the acquisition.	The language in the Stage 1 Changes table has since been updated to accurately reflect that providers will have a drop-down menu (not a radio button) to select their chosen timeframe for their reporting period for patient volume. This is reflected in Table 27 on page 134. As for the Exemption from Hospital-Based EPs, there is in fact a radio button in the figure asking if the EP funded the acquisition. This can be seen in Figure 44 on Page 236.
Page 5 of 15	"CHIP encounters": MCHIP encounters were previously excluded from patient volume claims query and will no longer be excluded starting October 1, 2012. What	NC took the MCHIP filter out of the patient volume query, which is run against the NC data warehouse to pull our verified patient volume. Therefore, given the query is run

	system changes will be made to instantiate the fact that the exclusions will no longer be made by NC?	outside of NC-MIPS, there are no system changes needed within NC-MIPS.

Current Version Control

Note that in addition to the below updates, the document has been copy-edited for clarity.

Date	Section(s) Updated	Page	Nature of Change
February 15, 2013	A.1.1.1	14	Added 2012 EP Survey/Results
February 15, 2013	A.1.1.2	18	Added 2012 EH Survey/Results
February 15, 2013	A.8	59	Changed the title to: MMIS and Current HIT/HIE Relations with MITA Assessment
February 15, 2013	A.11	62	Removed A.11.3 and described N3CN Provider Portal info in A.11.2
February 15, 2013	B.2	75	Section updated with new NC HIE strategy
February 15, 2013	B.2.2	81	New section describing N3CN & NC HIE merger
February 15, 2013	B.5	95	New section: Proposed Vendor Initiatives
February 15, 2013	B.6	100	Formerly B.5 & is updated per CMS' comments
February 15, 2013	B.7	100	Formerly B.6 & is updated to reflect new NC HIE strategy
February 15, 2013	B.8-B.9	103	Formerly B.7-B.8
February 15, 2013	C.1.2	104	Summarized developments from program year 2012 and added future plans
February 15, 2013	C.2	109	Updated to reflect new communication goals of the Program
February 15, 2013	C.2.2.5	113	Revamped the State and Current Gap Analysis to reflect new findings

February 15, 2013	C.2.3	113	Added new section: Statewide HIT/HIE Conference
February 15, 2013	C.2.4	115	Formerly C.2.3
February 15, 2013	C.3	115	Updated Patient Volume validation requirements with Stage 1 Changes per the Stage 2 Final Rule
February 15, 2013	C.3.3	117	New Section: Group Affiliation
February 15, 2013	C.3.4-C.3.7	118	Formerly C.3.3–C.3.6
February 15, 2013	C.3.8	126	New Section: Stage 2 Regulation Changes Affecting Stage 1 MU and 2013 Eligibility Requirements
February 15, 2013	D	169	New strategy implemented, & updated per CMS feedback
February 15, 2013	E.1	200	Updated 2012 section & added 2013 section
February 15, 2013	Appendices	205	Appendices have been added and updated

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Appendix 4 - 2012 NC Medicaid EHR Incentive Program Survey (EPs)

2012 NC Medicaid Electronic Health Record (EHR) Incentive Program Survey

Respondents:	1143 displayed, 1143 total	Status:	Closed
Launched Date:	12/12/2012	Closed Date:	01/01/2013

1. Practice Ownership

	Response Total	Response Percent	Points	Avg
Physician-owned	453	47%	n/a	n/a
HMO	0	0%	n/a	n/a
Federally-Qualified Health Center (FQHC)	34	3%	n/a	n/a
Rural Health Center (RHC)	25	3%	n/a	n/a
University-affiliated (i.e., UNC, Duke, ECU, Wake Forest, etc.)	19	2%	n/a	n/a
Other, please specify view	443	46%	n/a	n/a
Total Respondents	973	100%		
(skipped this question)	170			

2. Provider Specialty

	Response Total	Response Percent	Points	Avg
Primary Care	142	15%	n/a	n/a
Surgery	30	3%	n/a	n/a
Pediatrics	103	11%	n/a	n/a
Dentistry	90	9%	n/a	n/a
Nurse Practitioner	19	2%	n/a	n/a
Certified Nurse Midwife	0	0%	n/a	n/a
OB/GYN	32	3%	n/a	n/a
Internal Medicine	22	2%	n/a	n/a
Physician Assistant	4	0%	n/a	n/a
Other, please specify view	513	54%	n/a	n/a
Total Respondents	952	100%		
(skipped this question)	191			

3. Are you aware of the NC Medicaid EHR Incentive Program?

	Response Total	Response Percent	Points	Avg
Yes	607	64%	n/a	n/a
No	340	36%	n/a	n/a
Total Respondents	947			
(skipped this question)	196			

4. Does your practice currently use an electronic health record (EHR) or electronic medical record (EMR)?

	Response Total	Response Percent	Points	Avg
Yes	524	55%	n/a	n/a
No	423	45%	n/a	n/a
Total Respondents	947	100%		
(skipped this question)	196			

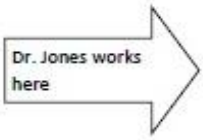
Appendix 8 – Patient Volume Methodology Provider Guidance

Group Methodology for Patient Volume Reporting

'**Group**' means one or more eligible professionals practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization.

At a single location...

Dr. Jones



Raleigh location of ABC Healthcare

If Dr. Jones chooses group methodology and defines the group as a single practice location (the Raleigh location of ABC Healthcare), she must attest using the encounters from EVERY professional (eligible professionals such as MDs and non-eligible professionals such as RNs, phlebotomists, etc.) at this location who provided services within the group's consecutive 90-day reporting period from the prior year.

In other words, if an eligible professional defines the group as a single practice location, every professional's encounters at that location must be accounted for when calculating patient volume.

Please note, so long as a new provider has an 'appropriate' current affiliation with a practice, they do not need to have been with the group during the group's selected reporting period to attest using group methodology.

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Group Methodology for Patient Volume Reporting

'**Group**' means one or more eligible professionals practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization.

At several practice locations in the same town, city, region or part of the state...

Triangle Region (4 locations)

Raleigh location of ABC Healthcare

Durham location of ABC Healthcare

Cary location of ABC Healthcare

Chapel Hill location of ABC Healthcare

If Dr. Jones chooses group methodology and defines the group so that it consists of the practice locations within a logical geographical region (the Triangle Region), she must attest using the encounters from EVERY professional (eligible professionals such as MDs and non-eligible professionals such as RNs, phlebotomists, etc.) at the locations within her defined region who provided services the group's chosen consecutive 90-day reporting period from the prior year. Please note, EPs are required to report on at least one location with certified EHR technology.

In other words, if an eligible professional defines the group so that it consists of the practices within a logical geographical region, every professional's encounters within the practice locations in this region must be accounted for when calculating patient volume.

Please note, so long as a new provider has an 'appropriate' current affiliation with a practice, they do not need to have been with the group during the group's selected reporting period to attest using group methodology.

Addressee's Name
Date
Insert PI Case #
Page 2

Chief Hearing Officer
DHHS Hearing Office
2501 Mail Service Center
Raleigh, North Carolina 27699-2501

Attention PI Case #: <Insert PI Case #>

You may submit written documentation for review. You have no less than thirty (30) calendar days to submit additional documentation for review that was not provided at the original audit. Following reconsideration review, you will be notified in writing of the final decision.

If you do not request a reconsideration review within 15 business days of receipt of this letter, or if you disagree with the reconsideration review decision, you may file a petition for a contested case hearing with the Office of Administrative Hearings (OAH) in accordance with G.S. § 150B-23(a). You have sixty (60) calendar days from either the date of this letter (if you do not request a reconsideration review) or the date of the reconsideration review decision to **file** a contested case petition with the OAH. Petition forms are available on the OAH website at http://www.ncoah.com/forms.html. There may be a fee associated with filing a petition at OAH. If you have questions about the OAH appeal process or the filing fee, OAH can be reached directly at (919) 431-3000. You **must** file the contested case petition form with the Office of Administrative Hearings, either in person at 1711 New Hope Church Road, Raleigh, NC 27609, by mail at 6714 Mail Service Center, Raleigh, NC 27699-6714 or via facsimile or electronic transmission in accordance with 26 NCAC 03.0101(c) **and** mail a copy to Legal Counsel, NC Department of Health and Human Services, 101 Blair Drive, Raleigh, NC, 27603.

In accordance with 10A NCAC 22F .0402(e), unless a request is filed at the Office of Administrative Hearings within the time provided, the reconsideration review decision shall become the Department's final decision.

Pursuant to 42 CFR 433 Subpart F, DMA must collect all overpayments made to Medicaid providers in order to receive full federal financial participation for the NC Medicaid Program. Within 30 days from the date this overpayment becomes final pursuant to N.C.G.S. §108C-2(5), you must send a check in the amount of $<insert $ amount> (or the amount specified in the decision, if any) to:

Office of Controller
DMA-Accounts Receivable
2022 Mail Service Center
Raleigh, North Carolina 27699-2022

Attention PI Case #: <Insert PI case #>

To assure your payment is properly credited, please enclose the attached payment form with your check. You may also request that the overpayment be recovered from claim payments, or you may request approval for a payment plan not to exceed 24 months.

PLEASE NOTE: The Department is not required to approve requests for payment plans.

In accordance with N.C.G.S. §105-241.21 and as required by N.C.G.S. §147-86.23, a late payment penalty will be assessed and monthly interest will begin to accrue 30 days from the date this overpayment becomes final.

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Any communication about this matter should be with the Division of Medical Assistance, Program Integrity Section. **Do not, under any circumstances, request that HP Enterprise Services adjust for the amount or items identified here as this could result in duplicate recoupment.**

If you have questions about this Notice, please call <Insert Name> at <Insert Phone Numer> or by fax at <Insert fax number>.

Sincerely,

<Insert Name and Title>
<Insert DMA Program Integrity Section or Vendor Name>

Enclosures

cc: Accounts Receivable Section
Program Integrity Assistant Director

****PLEASE ATTACH THIS TO YOUR REFUND CHECK****

TO: Office of Controller
DMA-Accounts Receivable
2022 Mail Service Center
Raleigh, North Carolina 27699-2022

ACTION: ____ Payment is attached.

____ I request that this overpayment be withheld from my future Medicaid claims payments.

The assessment of penalty and interest begins thirty (30) days from the date the overpayment becomes final.

NOTE TO PROVIDER: Please attach a copy of the Adverse Findings chart for proper credit.

SIGNED: _____

DATE: _____

FOR: DMA Program Integrity Section or Vendor Name: insert Section Name

Provider Name: insert Provider Name

Medicaid Provider Number: insert Medicaid Provider Number

Program Integrity Case Number: insert PI Case #

nvestigator: insert Investigator name

Notice of Overpayment Amount: $insert $ amount

Revised Overpayment Amount after Reconsideration Review: $_____ (attach copy of review decision)

ATTENTION PROVIDER: Any communication about this matter should be with the Division of Medical Assistance. Do not, under any circumstances, request that HP Enterprise Services adjust for the amount or items identified here, as this could result in duplicate recoupment.

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REQUEST FOR RECONSIDERATION

This request must be received by the DHHS Hearing Officer no later than **15 business days** from the receipt of the notification letter. Please include a copy of the notification letter with your reconsideration request. You may submit as much documentation as necessary. If you choose to submit documentation by fax to the DHHS Hearing Office at (919) 814-0032 please limit the documents to 10 pages or less.

If you have any questions about the reconsideration, please call the DHHS Hearing Office at (919) 814-0090.

IMPORTANT: The DHHS Hearing Office must receive your request by 5pm on the date it is due.

I hereby request a reconsideration review of the overpayment identified. I prefer the following type of review (please check one):

_____ Paper (attach any additional documentation you wish considered)

_____ Personal (by scheduled telephone conference call)

_____ Personal (I understand this will be held in Raleigh)

Print Name: _____

Signed: _____

Date: _____

Telephone: _____

MAIL TO: **Hearing Office**
Department of Health and Human Services
2501 Mail Service Center
Raleigh, North Carolina 27699-2501
Facsimile (919) 814-0032

RE: DMA Program Integrity Section or Vendor: insert Section Name
Provider Name: insert Provider Name
Medicaid Provider Number: insert Medicaid Provider Number
Program Integrity Case Number: insert PI Case #
Investigator: insert Investigator name
Overpayment Amount: $insert $ amount
Date of Notice of Overpayment: insert date

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NC Medicaid Health Information Technology Plan Overview

Executive Summary

This State Medicaid Health Information Technology (HIT) Plan (SMHP) outlines the NC Department of Health and Human Services (NC DHHS), Division of Medical Assistance (DMA) strategy through 2016 for implementing the Medicaid Electronic Health Record (EHR) Incentive Program authorized under Section 4201 of the American Recovery and Reinvestment Act of 2009 (ARRA).

North Carolina recognizes the opportunities provided by the EHR Incentive Program (the Program) for improved care coordination and reduction of waste in the healthcare system. The sections of this SMHP include a description of the current state of HIT in North Carolina, its five-year HIT vision, approach to administering the EHR Incentive Program, audit strategy, and HIT roadmap. This document provides the framework for a common understanding of the goals of the NC Medicaid HIT unit. This is a dynamic document which will be updated no less than annually as NC continues to track and plan for acceleration of Meaningful Use (MU) of certified electronic health record technology (CEHRT).

Section A details the various HIT initiatives that are in progress across the state, and reports on the results of various surveys of the provider population and technologies.

Section B outlines the vision and architecture of the state's goals in alignment with the NC Health Information Exchange (HIE) Operational Plan and the expansion of North Carolina Community Care Networks' (N3CN) Informatics Center (IC) to support MU of CEHRT, improve the quality of patient care, and coordinate care management of Medicaid patients. This section also details the specific goals of the EHR Incentive Program and the Program's relationship to Medicaid's larger technical infrastructure and state law.

Section C describes North Carolina's plans for administration and oversight of the EHR Incentive Program. The Department made an early and significant investment in this Program, distributing the first incentive payments to providers in March 2011.

Section D details the state's audit strategy for the EHR Incentive Program, which is targeted at ensuring that North Carolina is a responsible steward of Medicaid funds and that appropriate incentive payments are made to professionals and hospitals who meet all eligibility criteria. The state will prevent and identify suspected fraud and abuse through data analysis, rigorous pre-payment validation activities, and targeted post-payment auditing.

Finally, Section E addresses the State HIT Roadmap, including adoption goals and benchmarking activities. North Carolina understands that this journey will require persistence, ongoing analysis of adoption patterns, and regular adjustment of outreach efforts to be successful.

North Carolina will remain focused on the tasks and goals herein to contribute to a more efficient, more effective healthcare system and a healthier population. This SMHP represents one very important component of how the Department will achieve its mission to "protect the health and safety of all North Carolinians and provide essential human services."

Role of Medicaid in State HIT and HIE Coordination

In response to the opportunities and requirements for developing and overseeing the Medicaid EHR Incentive program, North Carolina Medicaid has adopted a multi-level planning strategy that simultaneously addresses:

(1) the internal needs of DMA; (2) coordination across North Carolina state government agencies; and (3) cooperation with public-private efforts. This organizational structure is graphically depicted below in **Figure 1**.

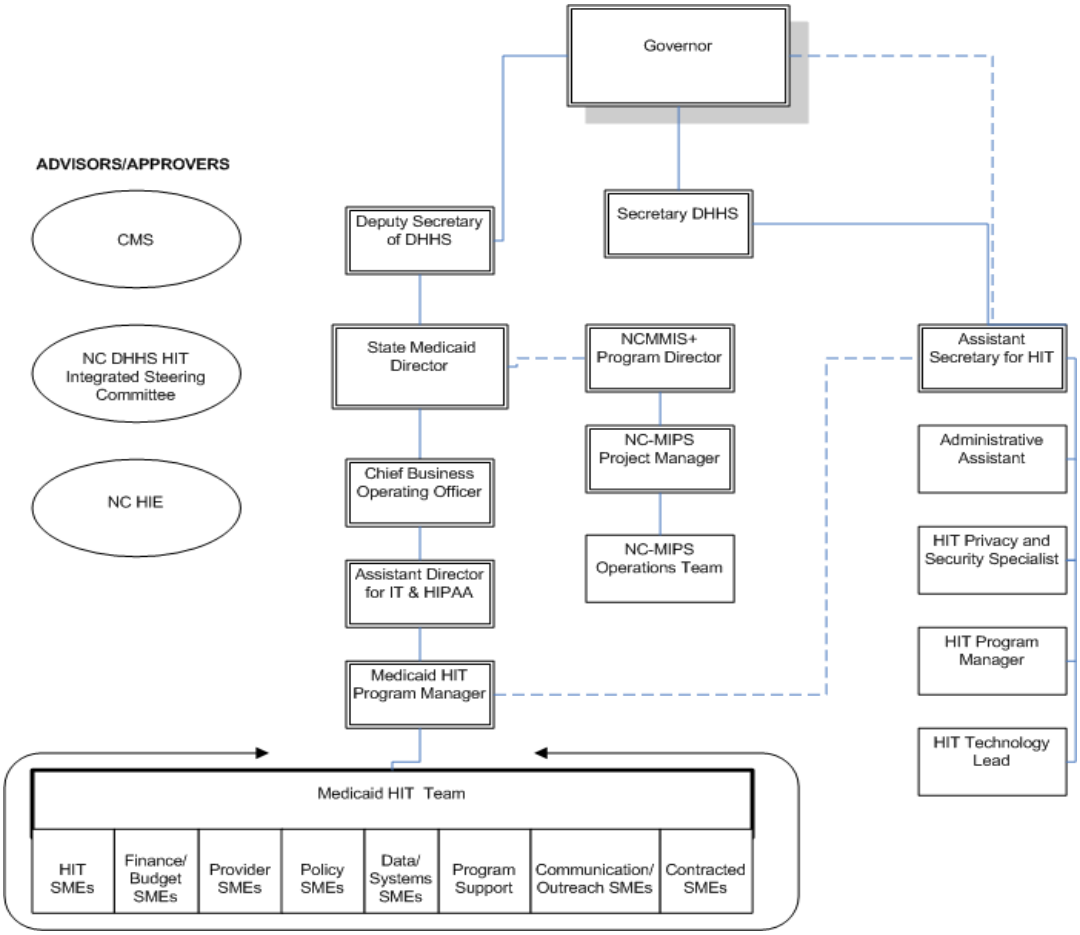


Figure 1 - North Carolina HIT and HIE Organizational Structure

DMA Medicaid Information Technology Architecture (MITA) and HIT Coordination Activities

The Office of Medicaid Management Information System Services (OMMISS) oversees the Replacement Medicaid Management Information System (MMIS) activities as well as the MITA Self-State Assessment. DHHS is coordinating its HIT efforts with the MITA transition plans for the replacement MMIS, called the NC Transparent Reporting, Accounting, Collaboration and Knowledge Management System (NCTracks). DHHS recognizes that there is a synergistic connection between HIT activities and the MITA "To Be" assessment, which considers the State's goals for HIT in the future vision for the Medicaid and Behavioral Health enterprises.

DMA's all-encompassing vision for the future of the North Carolina Medicaid enterprise focuses on two key goals, each of which drove DMA's vision items and the "To Be" assessment of the MITA and state-specific business processes: North Carolina will become a health policy leader; and, the Medicaid enterprise will use the power of the Medicaid program to improve the standard of care across the state.

The "To Be" assessment indicates a solid progression through the MITA Capability Maturity Levels over the next five and 10+ years, resulting in primarily Level 3 or better ratings within the five-year timeframe and Level 5 ratings for the majority of the business processes within the 10+ year timeframe.

NC DHHS, in collaboration with the selected vendor, Computer Science Corporation (CSC), has launched NCTracks and a Reporting and Analytics solution which includes a data warehouse, decision support system, business intelligence, and fraud and abuse detection functionality.

Currently, NC-MIPS is a stand-alone system that obtains all of the required information from eligible providers; contains the necessary interfaces to the Centers for Medicare & Medicaid Services (CMS) and the Office of the National Coordinator (ONC). NC-MIPS generates a financial file for the MMIS fiscal agent for use in issuing incentive payments to providers.

Interagency Coordination

Per the *Session Law (SL) 2009-0451* of the NC General Assembly, the NC DHHS, in cooperation with the State Chief Information Officer (SCIO) and the NC Office of Economic Recovery and Investment, coordinates HIT policies and programs within the state. The Department's goal is to avoid duplication of efforts and to ensure that each entity undertaking HIT activities leverages its greatest expertise and technical capabilities in a manner that supports state and national goals.

This law also stipulates that NC DHHS shall establish and direct a HIT management structure that is efficient and transparent and that is compatible with the ONC governance mechanism. NC DHHS was further directed to provide quarterly written reports on the status of HIT efforts to the Senate Appropriations Committee on Health and Human Services, the House of Representatives Appropriations Subcommittee on Health and Human Services, and the Fiscal Research Division. In compliance with the law, NC DHHS established the Office of the State HIT Coordinator (OHIT). Since May 2013, the OHIT office has been 100% vacant. A new State HIT Coordinator was hired April 2014.

North Carolina convened the state's healthcare leaders and HIT and HIE stakeholder communities through multiple forums from 2009-2010. Those efforts resulted in the decision to establish the NC HIE, a public-private partnership to govern statewide HIE services in North Carolina. In December 2012, North Carolina Community Care Networks, Inc. (N3CN)'s board decided to acquire the NC HIE as a subsidiary. NC Medicaid also collaborates with North Carolina's Regional Extension Center (REC) to promote the acceleration of adoption and MU of CEHRT at the practice level.

A. North Carolina's "As-Is" HIT Landscape

A.1 EHR Adoption by Practitioners and Hospitals

To determine the status of North Carolina's "as-is" HIT landscape at the beginning of NC DMA initiatives in 2010, DMA developed and participated in two surveys of NC Medicaid providers. One pertained specifically to EHR usage and the second pertained to broadband availability. A follow-up survey on EHR usage and specifications as well as perceived benefits of MU of CEHRT was conducted in December 2012. DMA also estimated the number of providers who may qualify to participate in the NC Medicaid EHR Incentive Program in 2010, and has provided annual updates to that estimate in this section. DMA did not have the resources to issue a survey in 2013.

A.1.1 EHR Surveys

In 2010, North Carolina was engaged in the re-credentialing and enrollment of Medicaid providers using a new enrollment process and application. As part of this process, DMA requested that Medicaid providers complete a survey pertaining to their current and planned EHR use.

The 2010 NC Medicaid EHR Incentive Program survey included the following sections:

1. The current use of an EHR/EMR, product name, and year purchased;
2. The integration of an EHR with any applicable hospital systems;
3. Certification standards;
4. Providers' future plans for purchasing an EHR;
5. Barriers to EHR adoption;
6. Incentives that could impact EHR adoption;
7. Electronic prescribing; and,
8. Provider participation in Medicare.

In December 2012, the NC Medicaid EHR Incentive Program conducted another survey to gauge current EHR adoption and related information among Medicaid professionals. A separate survey was conducted for Medicaid hospitals in collaboration with the North Carolina Hospital Association (NCHA).

The 2012 NC Medicaid EHR Incentive Program survey included the following sections:

1. Practice Ownership;
2. Practice Specialty;
3. Awareness of the EHR Incentive Programs;
4. Adoption of EHR/EMRs in the provider community;
5. Types of EHR systems being utilized in the field;
6. Impact of EHRs on workplace efficiencies and quality of patient care;
7. Providers' future plans for participating in the NC Medicaid EHR Incentive Program;
8. Providers' future plans for adoption an EHR if they haven't already; and,
9. Barriers to EHR adoption.

The 2012 North Carolina Hospital Association survey included the following sections:

1. Awareness of the EHR Incentive Program;
2. Hospitals' future plans for participating in the NC Medicaid EHR Incentive Program;
3. Hospitals' awareness of their organization's potential incentive payment;

4. Information the hospital would like to receive; and,
5. Format the hospital would like to receive the information.

Responses to these surveys have been divided into two sections: eligible professionals and eligible hospitals.

A.1.1.1 EHR Surveys – Eligible Professionals

2010

As of September 1, 2010, a total of 1,360 individual provider (non-institutional) responses were aggregated. Of these respondents, 87 percent were individual physicians, 1 percent nurse practitioners, and 12 percent individual dentists. Thirty-three provider specialties responded; the majority included: 15 percent General/Family Practice, 11 percent Internal Medicine, 22 percent Pediatrics, 13 percent Radiology/Nuclear Medicine, and 10 percent General Dentistry.

The provider responses to the 27 questions are very useful with only two questions having a greater than 20 percent "no response" rate and 17 questions having a 15 percent-20 percent "no response" rate. The following is a summary of the survey results (refer to *Appendix 2: 2010 NC Provider Survey*):

- Sixty-eight percent stated that they also saw Medicare patients, 24 percent did not see Medicare patients, and 8 percent did not respond.
- There was a 93 percent response rate to the question, "Are you currently using an EHR/EMR?" Two percent did not know, 42 percent were not using EHR/EMR, 19 percent used part paper and part electronic, and 29 percent used all electronic.
- In total, 141 different products were identified by EHR users. Of these 141 products, the following had the highest percentage of use (note, some amalgamation of responses was made due to very similar but not identical responses): 17 percent had Allscripts, 11 percent had Centricity, and 7 percent had Misys.
- EHRs were purchased between 1981-2010, with the majority of systems being purchased in 2004 and later. Thirty-four percent stated that their system met certification standards. In a related question to those without an EHR, 14 percent of all 1,360 respondents indicated they would purchase an EHR in the next six to 12 months and 32 percent responded "no" to purchasing an EHR within the next six to 12 months.
- In response to the question, "Is the EHR integrated with the hospital systems admission system?" 18 percent said "yes," 57 percent indicated they did not know or said "no," and 19 percent did not respond.

Eleven potential barriers were presented in response to the question, "What are your greatest barriers to EHR adoption?" These barriers are listed in **Table 1** below, along with the response percentage indicating major and minor significance. The "no response" rate for the following questions ranged from 15-20 percent. The major barriers to EHR adoption were lack of capital and finding an EHR that met the provider's needs.

Potential Barriers to EHR Adoption	Major	Minor
The amount of capital needed	50%	10%
Uncertainty about return on investment	31%	21%
Resistance to adoption by physicians	15%	31%

Potential Barriers to EHR Adoption	Major	Minor
Capacity to select, install and implement an EHR	26%	26%
Concerns about loss of productivity during transition	34%	21%
Concerns about inappropriate disclosure of patient data	19%	34%
Concerns about illegal record tampering or hacking	17%	37%
Concerns about legality of hospital donated EHRs	8%	19%
Concerns about legal liability if patients have more access to their information	10%	35%
Finding an EHR that meets provider's needs	43%	14%
Concerns that the system will be obsolete	26%	29%

Table 1 - Potential Barriers to EHR Adoption, EPs (2010)

The survey specified five conditions and inquired about the effect of each condition in incentivizing physicians to adopt an EHR. The "no response" rate for these questions ranged from 17-18 percent. **Table 2** below lists each condition and its response percentage indicating its impact as major or minor on the choice to adopt an EHR.

Incentivizing EHR Adoption	Major	Minor
Changing the law to protect providers from personal liability for record tampering by external parties via privacy or security breaches	40 %	20 %
Concerns about legal liability by NOT using the latest technology	27 %	30 %
Published certification standards that indicate whether an EHR has the necessary capabilities and functions	36 %	22 %
Incentive for the purchase of an EHR	48 %	13 %
Additional payment for the use of an EHR	46 %	15 %

Table 2 - Incentivizing EHR Adoption, EPs (2010)

In response to the final questions pertaining to electronic prescribing, 30 percent stated they were using electronic prescribing and 60 percent stated that they were not.

2012

As 2010-2011 saw the rollout of various HITECH initiatives, DMA determined that another survey would be helpful in determining how the EHR landscape has changed. On December 12, 2012, a web-based survey was sent out to all Medicaid-enrolled providers via email. In addition to the Medicaid email blast, the survey was sent through the DMA HIT Stakeholder Group with a request to send it to their various provider communities.

For a list of the HIT Stakeholder Group partner organizations, see *Section C.2.2.1: Provider Outreach via Partners*. To see this web survey, see *Appendix 4: 2012 NC Medicaid EHR Incentive Program Survey (for EPs)*. It should be noted that due to limited sample size, these results are not overly generalizable.

As of January 2, 2013, a total of 1,143 individual provider (non-institutional) responses were aggregated. The 2012 survey was designed to gain a qualitative view of EHR technology use and participation in the NC Medicaid EHR Incentive Program directly from Medicaid-enrolled providers. Through analysis of the survey results, the Program hopes to effectively target specific provider populations when strategizing around future outreach efforts.

Of the 85 percent of providers who responded when asked about practice ownership, 48 percent worked at physician/provider-owned practices; four percent worked at non-profits; three percent worked at Federally Qualified Health Centers (FQHC); three percent worked at RHCs; three percent worked at mental health practices (including counselors, psychologists and psychiatrists); two percent worked at university–affiliated practices (i.e., UNC, Duke, ECU, Wake Forest, etc.); two percent worked at hospitals; two percent worked at home care organizations; one percent worked at health departments; and, one percent worked at a group home.

The survey asked providers to indicate their practice specialty, of the 83 percent of providers who responded, 15 percent were primary care physicians; 12 percent were mental/behavioral health professionals; 11 percent specialized in pediatrics; nine percent were practicing dentistry; three percent specialized in surgery; three percent specialized in OB/GYN services; three percent specialized in optometry; two percent were nurse practitioners; and, two percent were physician assistants.

The following is a summary of the survey results (note, some amalgamation of responses was made due to very similar but not identical responses):

- Of the 83 percent of Medicaid-enrolled providers who responded, 64 percent of the providers were aware of the NC Medicaid EHR Incentive Program and 36 percent were not aware of the NC Medicaid EHR Incentive Program.
- When asked, "Does your practice currently using an EHR/EMR?" of the 83 percent Medicaid-enrolled providers who responded, 55 percent currently used an EHR/EMR in their practice and 45 percent did not already use an EHR/EMR in their practices.
- In total, 431 participants responded to this question and identified specific EHRs being utilized in their practice. Of these products, the following had the highest percentage of use: 13 percent had a version of Allscripts, four percent had a version of eClinicalWorks, and four percent had a version of Epic.
- Two questions were targeted to providers who had not already adopted EHR/EMR technology :
    - Of the 61 percent of providers who have not yet adopted EHR/EMR technology, responded to the question"…do you plan on purchasing one in the next six to 12 months?" Of the 61 respondents, 19 percent answered 'Yes'; 28 percent answered 'No'; and, 53 percent had already adopted a certified EHR technology.
    - Of the 73 percent of providers who answered the question "what barriers to EHR adoption do you face?" the most common reason for not adopting the technology was financial barriers. (Refer to **Table 3** below for more details).
- Two questions were targeted to providers who had already adopted EHR/EMR technology:
    - Of the 40 percent providers with EHR/EMRs who responded to the question, "to what degree has (the EHR technology) affected workplace efficiencies?": **73 percent responded that the EHR positively affected their workplace efficiencies**; 18 percent indicated their workplace efficiencies have been negatively impacted by EHR/EMR technology; and, nine percent of

respondents indicated their practice has not been negatively or positively affected by EHR/EMR technology.

- Of the 40 percent of providers who have adopted EHR/EMR technology who responded to the question, "to what degree has (the EHR technology) affected the quality of patient care?": **62 percent responded that the EHR positively affected the quality of patient care**; seven percent indicated their quality of patient care has decreased since implementing EHR/EMR technology; and, 31 percent saw no difference in the quality of patient care.

- In response to the question, "What are your plans for participation in the EHR Incentive Program(s)?": of the 65 percent of participants who responded to this question, 21 percent of providers are already participating in the NC Medicaid EHR Incentive Program; 14 percent are already participating in the Medicare EHR Incentive Program; 27 percent plan to participate in the NC Medicaid EHR Incentive Program; 11 percent plan to participate in the Medicare EHR Incentive Program; and 26 percent of providers do not plan to participate in either EHR Incentive Program.

Barrier to EHR Adoption	**Response Percentage**
Amount of capital needed to acquire and implement an EHR	27 %
Uncertainty about return on investment	15 %
Resistance to adoption	5 %
Capacity to select, contract, install and implement an EHR	11 %
Concern about loss of productivity during transition to an EHR	11 %
Concern about inappropriate disclosure of patient information	8 %
Concern about illegal record tampering or 'hacking'	8 %
Concern about the legality of accepting an EHR that is provided by a hospital	2 %
Concern about physicians' liability if patients have more access to information in their medical records	4 %
Finding an EHR system that meets providers' needs	17 %
Concerns that the system will become obsolete	10 %
N/A (already have certified EHR)	22 %

Table 3 - Barriers to EHR Adoption, EPs (2012)

A.1.1.2 EHR Surveys – Eligible Hospitals

2010

As of August 2010, the responses of 125 hospitals were aggregated. Of these, 86 percent (107) were general hospitals. There were also two specialty and 16 critical access hospitals. Most hospitals were in the "fewer than 100 beds" category (44 percent) and 25 percent were in the 100-200 beds range. Hospitals in the 475-bed and upwards range represented 12 of the total respondents.

There was a 95 percent response rate to the question, "Are you currently using an EHR/EMR?" Ten percent did not know; 21 percent are not using EHR/EMR; 49 percent use part paper, part electronic; and 15 percent use all electronic. In total, 15 different products were identified by EHR users. Of these 15 products, the following had the highest percentage of use (note, some amalgamation of responses was made due to very similar but not identical responses): 26 percent had Meditech, 16 percent had Cerner, and 11 percent had Epic. EHRs were purchased between 1980 and 2009, with the majority of the systems being purchased in 2005 and later. Forty-four percent stated that the system met certification standards. In a related question to those who did not have an EHR, 21 percent indicated they would purchase one in the next six to 12 months.

In response to the question, "Is the EHR integrated with the hospital systems admission system?" 58 percent said yes, 19 percent indicated they did not know or said no, and 22 percent did not respond. This may indicate that the respondents may not be familiar with the differences between an EHR system and what are called ADT (admission, discharge and transfer) systems. ADT systems are ubiquitous in the industry, so it is unclear why there were a high number of "no" or "do not know" responses.

North Carolina also asked hospitals, "What are your greatest barriers to EHR adoption?" **Table 4** below lists 11 potential barriers presented and the response percentage indicating whether the respondent thought the potential barrier was of major or minor significance. The "no response" rate for the following questions ranged from 22-27 percent.

Potential Barriers to EHR Adoption	Major	Minor
The amount of capital needed	59 %	8 %
Uncertainty about return on investment	22 %	39 %
Resistance to adoption by physicians	33 %	27 %
Capacity to select, install and implement an EHR	28 %	27 %
Concern about loss of productivity during transition	22 %	38 %
Concerns about inappropriate disclosure of patient data	19 %	42 %
Concerns about illegal record tampering or hacking	16 %	44 %
Concerns about legality of hospital donated EHRs	7 %	27 %
Concerns about legal liability if patients have more access to their information	8 %	44 %
Finding an EHR that meets provider's needs	38 %	14 %

Potential Barriers to EHR Adoption	Major	Minor
Concerns that the system will be obsolete	19 %	31 %

Table 4 - Potential Barriers to EHR Adoption, EHs (2010)

The survey also specified five conditions and inquired about the effect of each condition in incentivizing hospitals to adopt an EHR. The "no response" rate for each question ranged from 17-20 percent. **Table 5** below lists each condition and the response percentage indicating its impact as major or minor on the choice to adopt an EHR.

Conditions Incentivizing EHR Adoption	Major	Minor
Changing the law to protect providers from personal liability for record tampering by external parties via privacy or security breaches	31 %	42 %
Concerns about legal liability by NOT using the latest technology	30 %	42 %
Published certification standards that indicate whether an EHR has the necessary capabilities and functions	37 %	26 %
Incentive for the purchase of an EHR	59 %	13 %
Additional payment for the use of an EHR	65 %	7 %

Table 5 - Conditions Incentivizing EHR Adoption, EHs (2010)

Clearly, the use of incentives for the purchase and use of an EHR is highly influential on the hospital provider community.

The final series of survey questions is related to electronic prescribing. The response to the question, "Are you using electronic prescribing?" was answered by all 125 survey respondents with 83 percent stating they were not. Eleven percent of the respondents did not respond. Since the respondents were hospitals, these results are not surprising since electronic prescribing is more often practiced in the ambulatory setting, wherein the individual provider communicates a prescription electronically to the retail pharmacist who fills the prescription.

Of the six percent of respondents indicating that they did use electronic prescribing, nine percent used a computer rather than a handheld device to send the prescription. One question attempted to identify vendors used. Of only 13 respondents, eight used Cerner, three used E-Script, and Allscripts ePrescribe and "CPSI within hospital" had one user each.

2012

The North Carolina Hospital Association (NCHA) released a survey to all the hospitals in their network on May 18, 2012 to which 89 of the 92 hospitals presumed to be eligible for Medicaid EHR incentives responded. DMA HIT submitted five questions related to the NC Medicaid EHR Incentive Program. The results of these 89 hospitals were collected and have been analyzed as follows:

- There was 100 percent response rate for the question, "Are you aware of the NC Medicaid EHR Incentive Program?" All of the EHs answered this question in the affirmative.

- There was a 100 percent response rate for the question, "In what year will you participating in the NC Medicaid EHR Incentive Program?" All respondents answered that they will be participating in Program Year 2012.
- There was a 100 percent response rate for the question "What is the amount you estimate you will receive as an incentive payment?" The mean amount of estimated incentive payments to be received was calculated. Among 43 percent of participants, the mean amount of incentive money expected to be received was $1,192,537. Of the respondents, 57 percent did not know the incentive payment amount they would expect to receive.
- There was an 82 percent response rate for the question, "What types of information would you like to receive regarding the NC Medicaid EHR Incentive Program?" The most common response was more information for MU and policy and program updates.
- There was a 75 percent response rate to the question, "In what format would you like to receive information from the EHR Incentive Program?" The most popular responses were through NCHA, Program Website and Informational Webinars.

A.1.2 Estimates of Eligible Professionals and Eligible Hospitals That May Meet Medicaid Volumes for the EHR Incentive Program

Eligible Professionals

2010

To identify North Carolina Medicaid professionals that may qualify for the Medicaid EHR Incentive Program in 2010, an analysis was conducted using 2009 NC Medicaid claims and encounter data and the below formula.

Formula: To estimate providers that have at least the minimum required volume of Medicaid patients to participate in the program, the following formula was used to estimate the total number of claims/encounters generated per provider per year:

- 3 claims per hour x 8 hours x 210 days = 5,040 claims/encounters per year
- 5,040 x 30 percent = 1,512 claims/encounters (for professionals qualifying under 30 percent rule)
- 5,040 x 20 percent = 1,008 claims/encounters (for pediatricians qualifying under 20 percent rule)

Note: DMA provided the estimated three claims per hour per the experience of DMA HIT team members who work with the claims data and pre-payment validation.

As different provider types have different lengths of encounters with patients, DMA estimated that the average provider would see approximately three patients each hour. DMA acknowledges that many providers average far more patient encounters, while other providers average fewer. DMA is interested in learning from state experiences how to more accurately survey the universe of eligible providers.

This initial analysis yielded 3,098 "preliminarily qualified" EPs. As 61 percent of 2010 survey respondents (see *Section A.1.1.1 EHR Surveys – Eligible Professionals*) currently used or planned to purchase an EHR in 2010, this percentage applied to the 3,098 "preliminarily qualified" professionals resulted in a rough estimation of 1,889 possible EP participants in the program's first year (2011).

3,098 (Preliminarily Qualified EPs) x 61 percent (see *Section A.1.1.1 EHR Surveys – Eligible Professionals (Total of Current EHR Use or Plan to Purchase)*) = 1,889 possible EP participants in 2011.

As of December 2011, roughly 807 of those 1,889 EPs had at least begun the attestation process with NC Medicaid.

2011

The same claims analysis conducted in 2010 was repeated in December 2011 for dates of service from December 1, 2010 through November 30, 2011, and is shown in **Table 6** below.

	Medicaid Enrolled Provider Count	Preliminarily Count of Potentially Qualified EPs	Percent of Enrolled Providers who are Potentially Qualified EPs
Physician (Not including pediatrics & osteopathy)	18,783	2,017	10.7%
Pediatrician (Qualifying under regular 30 percent rule)	1,871	707	37.8%
Pediatrician (Qualifying under special 20 percent rule)		176	9.4%
Osteopath	40	5	12.5%
Nurse Midwife	92	0	0%
Physician Assistant	0	0	0%
Dentist	1,930	356	18.4%
Nurse Practitioner	1,340	61	4.6%
Total	27,267	3,383	12.4%

Table 6 - Count of Medicaid Enrolled Providers and Preliminarily Qualified EPs (2011)

As of December 2011, NC Medicaid estimates 3,383 providers to be "preliminarily qualified" or potentially eligible.

Experience has shown that the estimated volume of qualifying providers may vary significantly from the actual number of program participants due to several variables; among them, the Stage 2 Final Rule now allows Medicaid-enrolled encounters to count toward a provider's patient volume threshold, EPs may average more or less than three patients per hour, Medicaid patient volume may change for EPs in 2012 and beyond, and certain billing practices by NC Medicaid providers may not mirror actual patient encounters.

2012

The same claims analysis conducted in 2010 was repeated in December 2012 for dates of service from December 1, 2011 through November 30, 2012, and is shown in **Table 7** below.

	2012 Medicaid Enrolled Provider Count	Estimate of Potentially Qualified Providers Based on 2012 Patient Volume	Percent of Enrolled Providers who are Potentially Qualified Providers
Physician (Not including pediatrics & osteopathy)	23,991	2,756	11%
Pediatrician (Qualifying under regular 30 percent rule)	2,227	796	36%
Pediatrician (Qualifying under special 20 percent rule)		235	11%
Osteopath	63	7	11%
Nurse Midwife	185	4	2%
Physician Assistant	0	0	---
Dentist	2,680	574	21%
Nurse Practitioner	3,039	106	3%
Total	**32,185**	**4,478**	**14%**

Table 7 - Count of Medicaid Enrolled Providers and Preliminarily Qualified EPs (2012)

"Potentially qualified based on patient volume" means that the provider had at least 378 Medicaid encounters (252 for pediatricians) in any three consecutive months in 2012.

Physician Assistants

In 2011, DMA began to allow Physician Assistants (PAs) in NC to register for their own Medicaid Provider Numbers (MPNs). Enrollment took effect on 4/1/2012 for all PAs, making 4/1/2012 the earliest date eligible PAs may begin participation in the program. According to the North Carolina Community Health Center Association (NCCHCA), 130 PAs, nurse practitioners, and certified nurse's work in FQHCs or RHCs in NC. PAs working in FQHCs or RHCs that are led by PAs are potentially eligible for the NC Medicaid EHR Incentive Program, assuming they meet the Medicaid/needy individual patient volume and other program requirements.

Eligible Hospitals

In order to identify "potentially eligible" North Carolina hospitals, an analysis was conducted utilizing NC Medicaid annual cost reports. Acute care hospitals must meet Medicaid patient volume thresholds of 10 percent (children's hospitals are exempt from this requirement). As of 2010, North Carolina had 112 Medicaid-enrolled hospitals that qualify for incentive payments based on hospital category (e.g., acute care, children's, and critical access within the CCN ranges defined by CMS). Of these, it is estimated that 92 qualify based on the required Medicaid volume threshold. This estimate holds true as of December 2012.

A.2 Broadband Survey

DMA and NC Healthcare Information and Communications Alliance, Inc. (NCHICA) contributed content to a survey conducted by the e-North Carolina Authority (e-NC), now NC Broadband, to assess the EHR readiness of NC's healthcare providers. e-NC was an initiative to promote the use of internet usage across NC, with an emphasis on rural NC. e-NC conducted a major survey of homes and businesses to better understand the adoption and use of internet services across the state.

As part of the State Broadband Initiative grand from the National Telecommunications and Information Administration, e-NC contracted with Strategic Networks Group (SNG) to initiate this survey about Internet connectivity and utilization beginning in early April 2010. From October 2009 – December 2011, the e-NC Authority served as the State Broadband Initiative for North Carolina. This federal grant was then transferred by legislative mandate to the North Carolina Department of Commerce effective January 1, 2012. NC Broadband, a division of Commerce, now tracks where broadband is available in the state for this federal initiative. http://www.ncbroadband.gov. This availability data is collected primarily from broadband service providers. In addition to the broadband availability data, NC Broadband conducts a Citizen Survey on broadband adoption every other year, with the last survey conducted in 2011, http://www.ncbroadband.gov/broadband-101/research. The Citizen Survey is conducted primarily via telephone survey.

The one-time data collection survey conducted in 2010 is the only survey under the grant that targeted health care providers. The survey was distributed via email thereby excluding the group participation from targeted survey respondents remains an on-going challenge for researchers. Less and less people and even businesses have landline telephones, and it can be difficult or impossible to survey people via mobile phones. Hardcopy mailings are expensive and can be viewed as more time consuming than online surveys. Yet, surveys distributed only via email generally do not capture input from people who are not online

SNG invited approximately 68,000 organizations in NC to fill out an online questionnaire on Internet connectivity and utilization. SNG sorted and analyzed responses by industry sector, including 14 health categories.

At a high level, the takeaway message from this extensive multi-organizational survey (including healthcare and non-healthcare organizations) can be summarized as follows:

Connectivity: Use of broadband services is very high across all types and locations of businesses and organizations. Only 1.2 percent of organizations/businesses use dial-up.

Broadband Utilization: Utilization of Internet-enabled applications and processes is still evolving. Simpler processes that have been available for a long time are heavily used across all types of users. Differentiation in utilization patterns emerge as processes become more complex and recent. The two most significant factors in utilization levels is size of organization and to which industrial classification an organization belongs.

Broadband and Deciding Where to Locate: Responses to the survey clearly indicate that availability and suitability of broadband plays an important role in corporate decisions as to whether to remain in a community, and if an organization is moving, which areas it is willing to consider.

Broadband Benefits and Impacts: Overall, the majority (57 percent) of organizations recognize broadband as "very important" across all benefits dimensions. The most generally recognized benefits are in the areas of improved efficiency and productivity. The most recognized external-facing benefit of broadband is in improving service to customers. Productivity-related benefits are recognized by more organizations than revenue-related benefits, such as market reach, competitiveness, increasing revenues, introducing new products, etc.

The following is an extract from the June 2010 report *E-Solutions Benchmarking – Technical Report prepared for e-NC*.

Purpose and Objectives

As part of the statewide North Carolina broadband planning project, surveys were conducted with businesses, organizations and households to collect information on the availability of broadband (high speed internet) and the uses, benefits, drivers, and barriers for broadband. The survey results provide insights into gaps and opportunities for increasing broadband utilization by organizations and households. Email invitations were sent to over 74,000 organizations and 29,000 households across the state. The business survey deployment was also focused towards three sectors of specific interest: health organizations, nonprofit organizations, and county/municipal government organizations.

This report presents the results of the survey-based research for the State of North Carolina with focus on the key findings that may be considered in forward planning to influence adoption of broadband-enabled applications and uses, referred to as e-solutions.

Profile

Partial to full responses were received from 1,168 establishments that indicated that health services are a significant part of their operations. Approximately half (46 percent) of these were private businesses. The remaining 54 percent of respondents were evenly split between nonprofit and government. Of the government health providers, 72 percent were county or municipal, while 23 percent were state entities.

In examining the location of these health service establishments, 58 percent had multiple locations. Fourteen percent were based out of an individual's primary residence. Forty-eight percent of respondents came from counties designated as rural and 52 percent non-rural. The respondents consisted of administrators (61 percent), physicians (7 percent), support staff (11 percent) and "others" (22 percent).

Respondents were asked to identify what type of health provider they represented. A large number of respondents (55 percent) did not fit within the categories provided, making it difficult to identify the type of establishment they represent.

A breakdown of the size of establishments that responded indicates a large percentage of small establishments, with 47 percent having five staff or fewer.

High Level Summary

1. Larger size is generally associated with higher adoption levels.
2. Mobility has emerged as an important function for health organizations, with 62 percent of organizations stating that mobile Web functions were either essential or very important to their organization.
3. Hospitals lead the way for almost all types of applications and processes, with very high adoption in the areas of Picture Archiving and Communications (PAC) Systems, Hospital Information Systems, Collaboration and Research (all 70 percent or higher). Hospitals lead a strong movement to adoption of EHR and Electronic Patients Records. While current use for EHR is only 54 percent in hospitals, an additional 40 percent are in the process of implementation or plan to implement in the next 24 months. There is significant evidence of EHR adoption among larger health providers.
4. In contrast, adoption or planning for remote services, such as home based services and remote monitoring, have relatively low levels of adoption and very limited evidence of growth.
5. Significant differences were found in assessments by different types of health providers around issues of Internet speeds (they matter more to hospitals) and loss of contact with patient (really matters to community mental health centers, but far less to community health centers).
6. Large establishments find most motivating factors to be very important. Among a large percentage of single person health providers, many of these same factors were not seen to be applicable. Across all

sectors, productivity and improved health outcomes were the two most frequently cited motivating factors.

7. Researching personal health issues is the one area where household use of telehealth is high as 41 percent.
8. Current and planned use of most telehealth services by private households is low, with only eight percent households currently using and 18 percent of households planning to use six of the seven available telehealth services. Nevertheless, respondents' willingness to explore telehealth services is high at 53 percent to 68 percent.
9. Only 3-9 percent of households who had used telehealth expressed any level of dissatisfaction. Depending on the type of telehealth service, between 55 percent and 69 percent of household respondents indicated that they were either "very satisfied" or "satisfied" with their experience.

Connectivity

Of 1,136 respondents that indicated their establishment provided health services, only six (all nonprofits) were on dialup. At the other end of the spectrum, 16 percent of respondents reported having a fiber connection. Among the health service respondents, 12.7 percent reported having speeds that were "not fast enough." Reliability was reported as an issue by only 3.9 percent. Only 114 health providers took the speed test that was available through the survey. While this small sample indicates that the results should be treated with caution, the breakdown is provided in *Appendix 5: Broadband Survey*.

A.3 Federally Qualified Health Centers and HIT/HIE

North Carolina Community Health Centers (CHCs) serve Medicaid, Medicare, and the working poor, indigent, and uninsured patients for just over $1.40 per day, per patient. The impact of CHCs has been significant for the state. In 2011, NC CHCs employed 2,444 full-time employees in medically underserved and rural areas. As of 2013, NC is also home to 34 Federally Qualified Health Centers (FQHCs) with 165 service sites across the state. Eighty-six additional CMS federally designated RHCs are also a vital part of the primary care safety net in the state.[1] The focus of NC CHCs is quality and comprehensive primary care with a strong emphasis on disease prevention and health maintenance.

Supporting the NC CHCs is the North Carolina Community Health Center Association (NCCHCA). NCCHCA was created in 1978 to provide a collective voice for participating health centers across the state. NCCHCA represents the interests of NC's health centers to federal, state, and local agencies and officials. NCCHCA also seeks support from foundations, corporations, and other private entities to increase the access of primary healthcare to all North Carolinians. In addition, NCCHCA helps communities to create new health centers or expand existing ones.

NC CHCs are composed of:

- 31 Health Center Grantees
- 165 Clinical Service Sites
- 5 School-Based/School-Linked Health Centers
- 4 Homeless Healthcare Grantees

[1]NC Rural Health Centers (DHHS Quarterly Legislative Report July 2010)

- 3 FQHC Look-Alike Facilities
- 1 Migrant Voucher Program
- 12 Migrant Voucher Program sites
- 165 Physicians
- 138 Nurse Practitioners/Physician Assistants/Certified Nurses
- 461 Nurses and other Medical Personnel
- 55 Dentists
- 60 Behavioral Health Providers
- 411,015 Patients
- 1,364,003 Patient Visits
- 52 percent of patients were uninsured (212,974)
- 20.8 percent of patients receive Medicaid (85,691)
- 95.1 percent of patients live below 200 percent of the Federal poverty level (FPL)
- 76 percent live below 100 percent of FPL
- 53,855 migrant and seasonal agricultural workers[2]

As of 2011, of the $2 billion ARRA funds available for community centers, 27 NC CHC's received a total of $33.3 million from five different programs: the Capital Improvement Program (CIP), Increased Demand for Community Health Center Services (IDS), Facilities Investment Programs (FIP), HIT Systems/Networks and New Access Points (US Department of Health and Human Services, 2009). CIP provided most of the federal ARRA funding ($20 million) to North Carolina's CHCs.

The CIP is a capital grant program that includes funding for HIT tools. **Table 8** below details the application and status of the various North Carolina CHC projects as of December 4, 2012.

Site	Applied for ARRA HIT Funds	Proposed Project	Funded	Progress
BRCHS	CIP	Practice Management System and EMR	Yes	Completed contract with Centricity
Carolina Family Health Centers	No – have approval to use excess funds from new building for EMR	EMR	Yes	EHR selected & purchased – Greenway

[2]NC Community Health Association; UDS_2011_ Roll-ups_NC Universal Report

Site	Applied for ARRA HIT Funds	Proposed Project	Funded	Progress
Caswell	No			
CommWell	CIP	Deploy Dentrix at all sites; teleconferencing equipment, conferencing and tele-psychiatry	Yes	Projects complete
First Choice	No			
Greene County Healthcare	Yes	Computer hardware	Yes	Completed fall 2009
Hot Springs	No			
Piedmont	CIP	EMR licensing for final site and GE server update	Yes	License purchase done; server upgrade complete
Bertie County Rural Health Association	CIP	Purchase EMR	Yes	EHR selected & purchased – eClinical Works
Anson	CIP	Purchase Citrix servers and thin clients	Yes	Complete
Goshen	CIP	Dedicated servers, equipment replacement, wireless installations	Yes	Complete
Roanoke CHC	CIP	Upgrade to certified EMR		EMR selected and implemented

Table 8 - Application and Status of Various CHC Projects

A.4 Veterans Administration and Indian Health Service EHR Program

ONC requested that NCHICA implement the Nationwide Health Information Network (NwHIN) to serve as a compliant gateway for a mature Health Information Organization (HIO) in North Carolina. The Western North Carolina Health Network (WNCHN) served as the HIO and the Asheville Veterans' Affairs (VA) Medical Center served as the primary partner in this project. The Asheville VA Medical Center provides care to approximately 100,000 veterans from Western North Carolina, upstate South Carolina and northern Georgia, with many of those individuals treated at WNCHN facilities.

The project was completed in September 2011, and the Asheville VA Medical Center became an early participant in the NwHIN. NCHICA expects to continue to use this project as a learning experience and incubation for expanding NwHIN connectivity for both public and private North Carolina health institutions. For more on the project, see *Section A.5.11.3 North Carolina Healthcare Information and Communications Alliance, Inc.*

Table 9 below lists the hospitals and clinics operated by the VA in North Carolina as of December 2012. These hospitals use various versions of the VA-standard EHR system, *VistA.*

VA Medical Centers
Asheville: Asheville VA Medical Center
Durham: Durham VA Medical Center
Fayetteville: Fayetteville VA Medical Center
Salisbury: Salisbury—W.G. (Bill) Hefner VA Medical Center
Outpatient Clinics
Elizabeth City: Albemarle Primary Outpatient Clinic
Hickory: Hickory CBOC
Community Based Outpatient Clinics (CBOCs)
Charlotte: Charlotte CBOC
Durham: Durham Clinic
Franklin: Franklin CBOC
Greenville: Greenville Clinic CBOC
Hamlet: Hamlet CBOC
Midway Park: Jacksonville CBOC
Community Based Outpatient Clinics (CBOCs)
Morehead City: Morehead City CBOC
Pembroke: Robeson County CBOC
Raleigh: Raleigh CBOC
Raleigh: Raleigh II CBOC

Rutherfordton: Rutherford County CBOC
Community Based Outpatient Clinics (CBOCs)
Wilmington: Wilmington CBOC
Community Based Outpatient Clinics (CBOCs)
Winston-Salem: Winston-Salem CBOC

Table 9 - Hospitals and Clinics Operated by the Veterans Administration

The Indian Health Services and the Cherokee Indian Hospital Authority

The Cherokee Indian Hospital (CIH) serves more than 14,000 members. They implemented an EHR system—the Resource Patient Management System (RPMS) system—in 1986. The IHS graphical user interface (GUI) was implemented in 2004. The GUI provides the capability to process both administrative and clinical data, and provides the Indian Health Services (IHS) Office of IT support, thereby lowering costs and enhancing functionality.

A.5 Stakeholder Involvement

The resources available through ARRA represent not only an unprecedented opportunity to help forge these unique elements into a truly cooperative and aligned system of care, but support a substantial body of stakeholders that can drive North Carolina to the needed HIE tipping point. A wide variety of stakeholders may not be direct recipients of ARRA funding, yet they contribute a vast amount of effort and funding so that the state can achieve higher levels of HIT use and will improve the exchange of health information.

Table 10 below lists the major North Carolina activity for which funding was provided through the ARRA legislation, totaling over $200 million.

Grant Funding Opportunity	Grant Lead Agency	Amount of Grant
State HIE Cooperative Agreement	NC HIE	$12.9 Million, $1.7 Million, Supplemental Challenge Grant
Medicaid MU Planning	DMA	$2.29 Million
Medicaid EHR Incentive Program Administration and incentive payments	DMA	$104.2 Million

Grant Funding Opportunity	Grant Lead Agency	Amount of Grant
North Carolina Area Health Education Centers (AHEC)'s Regional Extension Center (REC)	NC AHEC Program at the University of North Carolina at Chapel Hill (UNC-CH), with assistance from the Carolinas Center for Medical Excellence (CCME), the North Carolina Medical Society (NCMS), and Community Care of North Carolina (CCNC)	$13.6 million
HIT Workforce Community College Consortia Program (non-degree programs)	Pitt Community College	$21 million
Health IT Curriculum Development	Duke University Center for Health Informatics (DCHI)	$1.8 million
University-Based Training Program (UBT)	Duke University Medical Center and University of North Carolina	$2.1 million
Broadband – BTOP Round 1	MCNC and North Carolina Research and Education Network (NCREN)	$28.2 million
Broadband – BTOP Round 2	MCNC, City of Charlotte, Olive Hill Community Economic Development, WinstonNet, and Yadkin Valley Telephone Membership Corporation	$115 million
Comparative Effectiveness Research: Mental Health Data Integration Project	N3CN, UNC Sheps Center, and DHHS	$991.332

Table 10 - ARRA Funding in North Carolina (2012)

A.5.1 State HIE Cooperative Agreement

The State HIE Cooperative Agreement, originally awarded to the NC Health and Wellness Trust Fund Commission, was transferred to a 501(c)(3) organization on December 1, 2010. The 501 (c)(3) is more commonly referred to as the NC Health Information Exchange (NC HIE). This organization is described below in *Section A.7: Health Information Exchange.*

A.5.2 Regional Extension Center: NC Area Health Education Centers

The NC AHEC Program at the University of North Carolina at Chapel Hill (UNC-CH) was awarded a grant on February 8, 2010 to perform the function of the NC Regional Extension Center (REC). NC AHEC has worked with the Carolinas Center for Medical Excellence (CCME), the North Carolina Medical Society Foundation (NCMSF), Community Care of North Carolina (CCNC), and the NC Institute for Public Health (IPH) to build a detailed training program for personnel in nine regional AHECs across the state.

Table 11 below displays the number of practices and providers enrolled in each of the nine AHEC regions across the state as of 2012.

AHEC Region	Practices	Providers
Area L	65	239
Charlotte	122	337
Eastern	181	612
Greensboro	152	613
Mountain	118	576
Northwest	101	449
Southeast	125	360
Southern	123	287
Wake	106	365
Total for NC:	1093	3838

Table 11 - NC AHEC's Enrolled Practices/Providers

A.5.2.1 NC REC Technical Assistance Team

Via the statewide infrastructure of their nine regional AHECs, as of the third quarter of calendar year 2013, the NC AHEC REC has enrolled over 3,800 primary care providers, which exceeds the program's goal of 3,465.

The original application submitted by NC AHEC to the ONC included a provision for development of a group purchasing agreement. However, after further analysis of the marketplace, it was determined that contracting with a limited number of vendors would alienate other vendor products and stifle innovation. Therefore, NC AHEC has chosen to build the capacity to support a large number of products to serve the diverse provider community.

The NC AHEC REC staff provides direct, onsite and local support to primary care practices in their region. This support includes: assessing the practice; assisting in the selection of the most appropriate EHR system; guidance on system implementation; security and risk assessments; and guidance for achieving MU.

NC was designated one of five "vanguard" states by the ONC due in large part to the success of NC AHEC REC's enrolling targeted primary care providers and supporting their progress toward MU of EHRs. (Vanguard States: North Carolina, Ohio, California, Washington, and New York.)

ONC requires NC AHEC to monitor enrollment activity via implementation milestones. These milestones are defined as follows:

- **Milestone 1:** 3,770 providers have signed an agreement to work with the NC AHEC REC.

- **Milestone 2:** 2,883 providers are live on an EHR and can produce e-Prescribing and quality data reports.
- **Milestone 3:** 716 providers have successfully attested to meaningfully using an EHR and can be validated with the data pulled from the certified EHR system. (Note: the first year of Medicaid's adopt/implement/upgrade (AIU) attestation does not count toward milestone 3).

Figure 2 below displays NC AHEC's current status, as of January 2013 for providers meeting the ONC milestones.

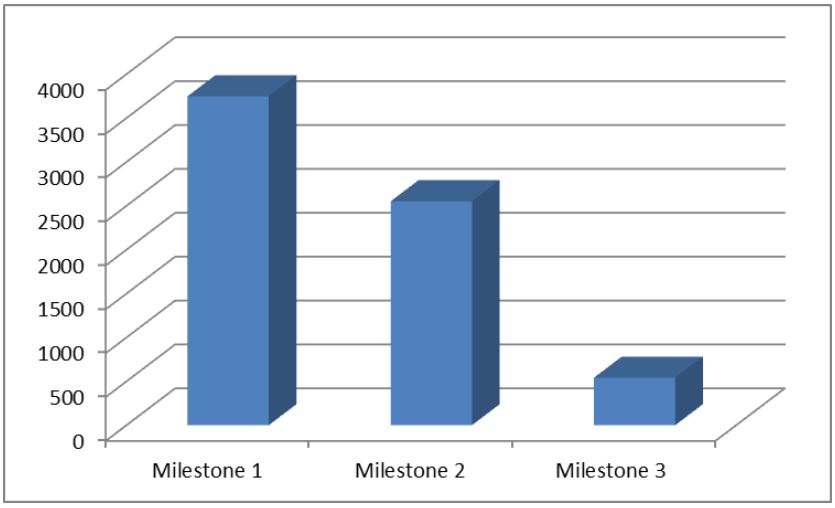


Figure 2 - NC AHEC's Progress Toward ONC Milestone

In 2013, the NC AHEC REC will be working in conjunction with the NC Division of Public Health (DPH) to carry out the Community Transformation Grant. Over the course of 2013, NC AHEC will select 90 practices from the NC AHEC REC program to focus on improving outcomes in Hypertension, High Cholesterol and Tobacco Use.

A.5.3 Southern Piedmont Community Care Plan

Community Care of the Southern Piedmont (CCofSP) is one of 14 independent networks of CCNC. CCofSP was one of only 17 organizations nationwide selected to be a Beacon Community after a rigorous and competitive grant application and selection process. The Beacon Community Cooperative Agreement Program provides communities with funding to build and strengthen their HIT infrastructure and exchange capabilities. These communities of healthcare providers demonstrate the vision of a future where hospitals, clinicians, and patients are meaningful users of health IT, and together, help the community achieve measurable improvements in healthcare quality, safety, efficiency, and population health.

The Southern Piedmont Beacon Community (SPBC) is engaged in building and strengthening local HIT infrastructure, testing innovative approaches, and making measurable improvements, leading to better health and better care at lower cost. In addition, Beacon has been collaborating with the local and state AHEC RECs to assist EPs and EHs meet MU and attest for a Medicaid or Medicare EHR incentive payment.

The SPBC is comprised of three medical centers, two health departments and one health alliance in a three county area consisting of Cabarrus, Rowan, and Stanly, located in the Piedmont region of North Carolina. The projects the Health System and Health Department/Alliances are engaged in will lead to:

- Increased health information exchange between providers, hospitals, and other appropriate stakeholders;
- Decreased inappropriate emergency department (ED) utilization;
- Decreased preventable hospital readmissions;
- Improved chronic care disease management for those with congestive heart failure, diabetes and chronic obstructive pulmonary disease; and,
- Improved public health.

Health Systems

The following is an overview of the Beacon funded projects in three health systems in North Carolina:

Carolina Medical Center-Northeast - The projects being implemented at Carolina Medical Center-Northeast are: the IC Data Connection and Continuity of Care document (CCD); transitional care, focusing on readmissions and care coordination; virtual home visits with remote monitoring; patient safety net; and a COPD pilot.

Rowan Regional Medical Center - The projects being implemented at Rowan Regional Medical Center are: the IC Data Connection and the CCD; the formation of a Transitional Care Department, which focuses on readmissions, care coordination, and medication optimization; an Emergency Room Behavioral Health Program; a Diabetes Navigator; a CHF inpatient program and outpatient clinic; bedside availability of computers; and Red/Louise.

Stanly Regional Medical Center - The projects being implemented at Stanley Regional Medical Center are: the IC Data Connection and the CCD; and Transitional Care, including a Transitional Care Clinic.

Each health system has implemented the Patient Activation Measure (PAM)® Tool. The (PAM)® survey assesses the knowledge, skills and confidence integral to managing one's own health and healthcare. With the ability to measure activation and uncover related insights into consumer self-management competencies, care support and education can be more effectively tailored to help individuals become more engaged and successfully manage their own health. **Figure 3** below describes the (PAM)® Model's activation levels.

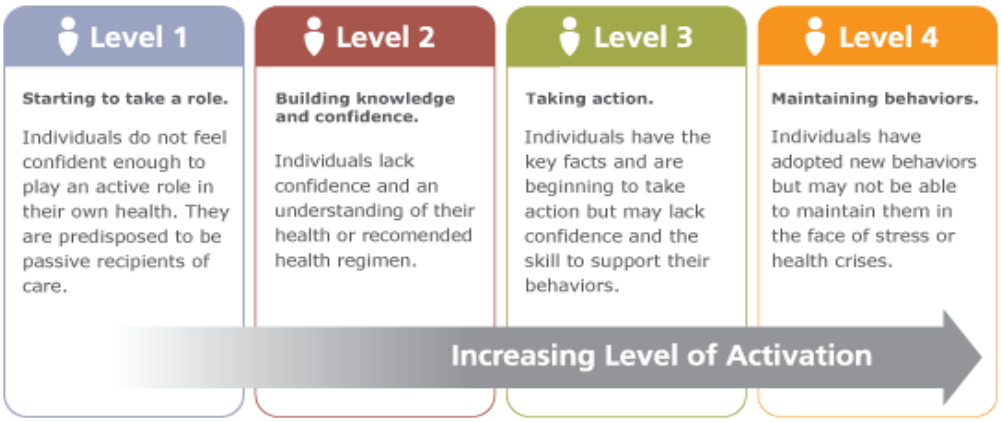


Figure 3 - Levels of Activation in the (PAM)® Model

PAM evaluates the competencies that drive health behavior by measuring an individual's self-management competency and one's sense of being in charge of his or her health.

Through these projects, Beacon has been engaged in the process of:

- Collecting, compiling and reporting the data monthly;
- Collecting observational/anecdotal findings from the Care Managers;

- Remaining interested in subsequent tool administration results:
  - Will scores simply improve with increased exposure to a care manager?;
  - Will scores improve with intentioned coaching activities and motivational interviewing techniques?; and,
- Demonstrating success and spread beyond Beacon by time and geography.

Pharmacy Support

Beacon is funding full-time and part-time pharmacists to provide pharmacy reviews. There have been 1,313 adherence gap interventions made on 850 patients, and 69 patients have received a comprehensive medication review. A behavioral health pharmacist is providing medication management to support Beacon initiatives. The pharmacist(s) in each county work with patients on transition of care initiatives, adherence issues, the TREO report via physician referral, and case management referrals. They also continue to identify and make interventions on patients who do not consistently fill their prescription medications.

Health Departments

Rowan County Health Department – Rowan County Health Department upgraded their electronic medical record (EMR) to be compliant with ONC certification standards. They are nearing completion of scanning and archiving their paper records. Rowan County Health Department will be implementing electronic signatures, e-prescribing, and additional modules to their EMR over the next several months.

Stanly County Health Department – Stanley County Health Department implemented an EMR and is rolling out individual modules over the next several months.

Cabarrus Health Alliance (CHA) - Previous to Beacon, CHA had implemented an EMR. Their focus has been on adding additional modules to their system. CHA has completed the pharmacy and e-prescribing modules, and all providers are e-prescribing. They will roll out additional modules to their EMR over the next several months. Another innovative project CHA is engaged with is the Daily Disease Reporting (DDR) project. The DDR is a public health surveillance tool that relies on school nurses to capture symptom data for children in Cabarrus County schools. By 5 p.m. each evening, a list of the top 10 reported health concerns are compiled into a community-wide report that tracks disease incidence across all schools. This report is available to public health departments, providers, and schools.

In addition to the individual projects at both Rowan and Stanly County Health Departments and the Cabarrus Health Alliance, they have implemented, or will soon be implementing, the following projects: Automated Health Educator, "Anna," and the NC- Health Information Portal. "Anna" is an automated health educator who will educate clients in Women and Infant Children and family planning. NC-HIP is designed to graphically geo-locate information from health and demographic databases to help identify trends and aid in the targeting and development of interventions to prevent chronic diseases.

Centralized Projects and Organizations

The N3CN IC - Beacon funding and resources are being leveraged to build the "pipes" necessary to have data flow between hospitals, providers, and health departments. Test servers are operational and Admission, Discharge, Transfer (ADT) data has been successfully passed into the IC's Interface Engine. Beacon funding has also upgraded the Case Management Information System (CMIS); the CMIS version of transition of care has been recently released. They are now implementing new rules using clinical data, including diabetes related screenings. Alerts from these rules will be available in addition to the existing claims-based rules. Development has started for the CMIS companion tablet application. There is also a Patient Registry that is on schedule for release the end of 2012. Lab data from LabCorp and Solstice are complete and Quest is currently in progress.

For additional insight and information on the Southern Piedmont Beacon Community, please visit the following website *http://www.ccofsp.com/beacon*.

A.5.4 Pitt Community College

In March 2010, Pitt Community College was named one of five institutions across the country to lead a regional consortium of community colleges to train thousands of new HIT professionals. The Pitt Community College-led consortium received a $21.1 million cooperative agreement from the U.S. Department of Health and Human Services (HHS) for this project. Due to cost effective measures, a one-year no-cost extension was granted and an additional three-month no-cost extension has been offered and an application is pending.

As of October 2012, the total number of students ever enrolled in Region D was 1,500 with 563 completers and 390 students currently enrolled (refer to **Table 12** below).

Currently, Region D of the Health Information Technology for Economic and Clinical Health (HITECH) Act Workforce Training Program continues efforts to meet the goal of training 6,600 students across the southeast region of the country. There are three North Carolina member colleges:

- Central Piedmont Community College (252 completers) and Pitt Community College (224 completers) are the third and fourth highest producers of completers in the region.
- All three NC programs are actively enrolling students and are in the process of developing sustainability models for the continuation or integration of this training into their current curriculum programs and/or continuing education programs.
- Catawba Valley Community College and Pitt Community College are also developing initiatives via a pilot program specifically for RHCs, FQHCs, Critical Access Hospitals (CAHs) and rural hospitals with 50 or fewer beds.

New Students as of 10/31/12				
Workforce Role	Catawba Valley	Central Piedmont	Pitt Community	**Total**
Practice Workflow	10	0	0	**10**
Clinician Practitioner	0	0	0	**-**
Implementation Support Specialist	0	0	0	**-**
Implementation Manager	0	0	0	**-**
Technical Support Specialist	5	0	0	**5**
Trainer	2	0	0	**2**
Total	17	-	-	**17**
LESS WITHDRAWALS AS OF 10/31/12				

Workforce Role	Catawba Valley	Central Piedmont	Pitt Community	**Total**
Practice Workflow	7	0	1	**8**
Clinician Practitioner	0	0	2	**2**
Implementation Support Specialist	0	0	1	**1**
Implementation Manager	0	0	0	**-**
Technical Support Specialist	3	0	0	**3**
Trainer	4	0	0	**4**
Total	**14**	**-**	**4**	**18**
Individual Member Enrollment as of 10/31/12	119	186	85	
Total Enrolled Students (Start to 10/31/12)	**1,500**			
Total Attrition (Start to 10/31/12)	**547**			
Total Completers as of 10/31/12	**563**	**Catawba Valley Community College 87; Central Piedmont Community College 252; Pitt Community College 224**		
Total Active Students as of 10/31/12	**390**			

Table 12 - Pitt Community College Enrollment Numbers

A.5.5 Duke University Center for Health Informatics

The Duke University Center for Health Informatics (DCHI), in conjunction with its community college partners, Durham Technical, Rowan Cabarrus, and Pitt Community Colleges, have developed four components under the Curriculum Development Centers Program:

- Health Management Information Systems
- Installation and Maintenance of HIT Systems

- Networking and Health Information Exchange
- Fundamentals of Health Workflow Process Analysis and Redesign

All 20 components developed by the Curriculum Development Centers, Oregon Health & Science University, University of Alabama at Birmingham, Johns Hopkins University, Columbia University, and DCHI, are being used to train the following roles:

- Practice Workflow and Information Management Redesign Specialist
- Clinician/Practitioner Consultant
- Implementation Support Specialist/Manager
- Technical/Software Support Staff
- Trainer

Project Milestones:

- April, 2010 - Curriculum Development Centers Awarded
- August 9-11, 2010 - Curricular Material Training in Oregon
- October, 2010 - Version 1.0 posted for Regional Consortia
- May 16, 2011 - Version 2.0 posted for Regional Consortia
- June 20, 2011 - Version 2.0 released to the public
- Spring, 2011 - Version 3.0 public release
- May, 2012 - Version 3.0 downloaded in all 50 states and five territories, 93 countries and on six continents.
- June, 2011 - A total of 7,178 user accounts established
- March, 2012 - Duke University received ONC approval for a six-month extension to draft a sustainability plan
- June 11-12, 2012 - First meeting convened at Columbia University to work on the sustainability plan
- July 23, 2012 - Duke University hosted The North Carolina HITECH Workforce Call to Action Meeting

A.5.6 University-Based Training Program

Duke University and UNC-CH have partnered in the development of programs that will produce trained professionals for vital, highly specialized roles in HIT. Trainees in Duke's program will complete intensive courses in nine to 24 months. The programs at Duke lead to a Masters of Management in Clinical Informatics, awarded by the Duke Fuqua School of Business, a post-masters certificate or a Masters of Nursing with a Health Informatics specialty awarded by the Duke School of Nursing. The focus of the training at UNC-CH is in the Department of Public Health and the Department of Information and Library Science. The original target number of students to be trained was 88 one-year students and 9 two-year students. Due to cost savings from in-state tuition at UNC-CH and unused student insurance fees, the total number of students has increased. Together, Duke and UNC-CH will train 100 one-year students and 9 two-year students.

As of October 2012, 100 students have received UBT funding for the Duke and UNC-CH informatics programs and 48 have completed/graduated. **Table 13** below show the enrollment and completion totals.

Duke University and UNC-CH are offering training and research programs designed to produce highly specialized HIT professionals. At the conclusion of their studies, graduates of the Duke and UNC-CH informatics programs are expected to possess a firm grasp of concepts and skills needed to succeed in the following roles:

- Clinician/Public Health Leader
- Health Information Exchange Specialist

- Research and Development Scientist
- Programmer and Software Engineer
- HIT Sub-specialist

UBT Role	Total # enrolled as of October 2012		Total # completed or graduated as of October 2012	
	Certificate Program	Master's Program	Certificate Program	Master's Program
Clinician Leader	9	7	9	10
Public Health Leader	9	0	2	2
Health Information Management and Exchange Specialist	16	1	4	11
Research and Development Scientist	3	0	1	0

Table 13 - Enrollment and Completion Totals in University-Based Training Programs (2012)

A.5.7 Microelectronics Center of North Carolina

Microelectronics Center of North Carolina (MCNC) is an independent non-profit organization that employs advanced networking technologies and systems to help various sectors of Community Anchor Institutions (CAIs) in North Carolina communicate with their constituents more effectively and meet their specific organization's mission, vision, and goals. This includes utilizing the services provided by MCNC to:

- Advance the availability of EHRs and healthcare information exchange in North Carolina's healthcare industry;
- Continuously improve learning and collaboration throughout North Carolina's K-20 education community; and,
- Improve the availability and affordability of high speed broadband capability to all CAIs in North Carolina.

MCNC continues to make significant progress on the $144 million expansion of the North Carolina Research and Education Network (NC REN) with efforts expected to be complete by July, 2013. This effort is part of the federal NTIA Broadband Technologies Opportunity Program (BTOP) award. The NTIA divided the awarding of its BTOP funding into two rounds and staged a highly competitive application process in each round.

For **Round 1** awarded in January 2010, MCNC applied and received funding for a $39.9 million project (including $28.2 million in Federal BTOP Funds and $11.7M in privately raised match, including $7.7M from the MCNC Endowment) to build approximately 413 linear miles of newly constructed fiber optic broadband infrastructure and acquire another 400 miles of existing fiber optic broadband infrastructure in 37 counties in southeastern and western NC.

For **Round 2**, MCNC, in concert with the Frank Hawkins Kenan Institute of Private Enterprise and the School of Government at UNC-CH, crafted an application called the Golden LEAF Rural Broadband Initiative (GLRBI). The GLRBI application proposed to build more than 1,300 miles of new middle-mile fiber in the northeast, north central, northwest and south central portions of the state and acquire another 380 miles of existing fiber optic infrastructure in the same areas. The proposed project is valued at $104 million with $75.75 million coming from BTOP, $24 million from the Golden LEAF Foundation, and $4.25 million in other cash and in-kind donations from private sources.

In May 2012, the NTIA highlighted MCNC during a congressional hearing**.** Larry Strickling, Assistant Secretary for Communications and Information at NTIA, testified before the House Communications Subcommittee on how BTOP investments are making a positive impact and recipients nationwide are exceeding their performance goals in deploying new fiber-optic infrastructure. MCNC's two projects through the GLRBI were featured during the hearing.

BTOP Round 1 Update: In April 2012**,** MCNC announced the completion of the first round of the GLRBI. All broadband fiber associated with this phase of the project is now active and serving CAIs including K-12 schools, universities, community colleges, health care facilities, public health facilities, libraries, research institutions, and other sectors of CAIs in western and southeastern North Carolina.

Through Round 1 commercial partner FRC LLC, which invested $4 million into the project, fiber is now available to serve commercial businesses and last-mile consumer broadband needs in these same regions. To celebrate this achievement, MCNC hosted an online Twitter Town Hall on April 27, 2012, and answered questions about the GLRBI and expansion of broadband connectivity in North Carolina.

Archived content from the event may be viewed at www.mcnc.org/btop/townhall. This online-only event was an invitation from MCNC to anyone to participate in an open exchange about the project, its impacts, and future trends concerning networking and the rising need for bandwidth.

Golden Leaf Rural Broadband Initiative Update: As of January 4, 2013**, a**pproximately 90.9 percent of the second phase of the Golden LEAF Rural Broadband Initiative (GLRBI) is complete as both construction and deployment efforts have continued at a strong pace. MCNC is now within 150 miles of having all conduit related to the project installed. Overall, the project has now seen the completion of more than 1,200 miles of conduit installed, execution of Indefeasible Rights of Use (IRU) agreements on 360 miles, and fiber placement of about 920 miles. Deployment efforts to all the CAIs will be in full force beginning early in 2013. As required by the federal BTOP grant, all of the CAIs need to be connected by the end of June, 2013.

A.5.8 Mental Health Data Integration Project

North Carolina has received more than $100 million in Comparative Effectiveness Research funding through our nationally recognized medical centers: Duke University Health Systems, Vident Health, University of North Carolina Health Systems, and Wake Forest University Health Sciences. Using grant funds from the Agency for Healthcare Research and Quality, North Carolina is in the implementation phase of a two-year collaborative Mental Health Data Integration Project between N3CN, the University of North Carolina Cecil G. Sheps Center for Health Services Research, and three divisions under the NC DHHS: DMA, Division of State Operated Healthcare Facilities, and the MH/DD/SAS. The Project consists of three aims, which simultaneously advance NC's commitment to enhancing the knowledge base for care of complex patients with mental and physical comorbidities:

1. Creation of an integrated database to enhance infrastructure for comparative effectiveness research is complete for Mental Health Data Integration and includes claims data from four sources: Medicaid, Piedmont Behavioral Health, Integrated Payment and Reporting System, and

Healthcare Enterprise Accounts Receivable Tracking System. Categories of data included are mental health, developmental disabilities, and substance abuse.

2. Completion of a primary study, *The Use of Medical Home by Patients with Complex Mental Health and Medical Comorbidities* to demonstrate the usability of the integrated database. This project is complete and was carried out by CCNC and UNC-CH. The data analysis is ongoing, the study aims include:
    a) To examine whether complex patients with mental illness engage in medical homes as readily as complex patients without mental illness;
    b) To examine whether persons with mental illness use their medical homes as their mental health homes;
    c) To estimate the effect of engagement in medical homes on the quality of care for mental illness and for medical comorbidities; and,
    d) To examine the rate of engagement with medical home providers after psychiatric inpatient discharge.
3. Development of a structure for making the database available to the research community to support comparative effectiveness research, and to DHHS to support patient care, quality improvement, and care coordination across settings of care. A charter has been developed for the NCIDR Research Oversight Committee as well as a research request form. Currently, DHHS is in the process of identifying a research oversight committee chair and members and is accepting research request forms from interested parties.

DSOHF continues to implement VistA at Central Regional Hospital.

Four major VistA Production Milestones have been met:

- Central Region VistA Pharmacy Formulary is complete.
- All updates planned for Central Region VistA from the WorldVistA Community have been applied in the Production Environment.
- The VistA tests and panels for Coagulation, Chemistry, Serology, and Urinalysis are 100 percent complete.
- Patient census in VistA is now performed for both CRH and Whitaker patients.

A.5.9 Non-ARRA Funding – The North Carolina Children's Health Insurance Program Reauthorization Act Grant

CMS awarded 10 grants to states to establish and evaluate a national quality system for children's healthcare, which encompasses care provided through the Medicaid program and the Children's Health Insurance Program (CHIP). This grant is funded by the Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA).

The purpose of the CHIPRA grant is to evaluate a pediatric EHR format developed by the Agency for Healthcare Research and Quality (AHRQ). The evaluation will be used to assess the impact of the EHR on the quality and cost of children's health care across the care continuum.

As outlined in the statute, the grant projects will (A) experiment with and evaluate the use of new and existing measures of quality for children; (B) promote the use of HIT for the delivery of care for children; (C) evaluate provider-based models to improve the delivery of care; (D) demonstrate the impact of model pediatric EHRs; and (E) create targeted models to demonstrate their impact on health, quality, and cost. North Carolina received grants for three out of five categories: A, C and D. The grant period of performance will be 60 months, from FY 2010 through FY 2015.

North Carolina is using its Community Care infrastructure and working closely with the AHRQ contractor, Westat, to ensure that the AHRQ/CMS Model Children's EHR Format is implemented in a manner that ensures the ability to measure and evaluate its impact on child health care.

Practice presentations by the CHIPRA Category-D team, in coordination with CCNC networks, continue to engage providers in understanding the role of the EHR in clinical practice. For pediatric practices seeking a new or replacement EHR, the Model Format provides some guidance in assessing gaps in prospective products. These practices are also encouraged to participate in evaluating the Model Format's once they have chosen a product. As of December 2012, EHR vendors of interest continue to be educated on the project and negotiations continue around roles and vendor resource commitments.

CMS is interested in utilizing the CHIPRA grants, in part, to further CMS Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) goals. These goals include improving access to, utilization, and reporting of services to which children are entitled under EPSDT in areas such as oral health, vision, hearing, behavioral health, and obesity. Each component of the CHIPRA grant awarded to NC (i.e., performance measurement, provider-based models, and pediatric EHRs) offer opportunities for addressing these goals.

A.5.9.1 CHIPRA Grant Categories

North Carolina, via DMA and the Office of Rural Health and Community Care (ORHCC), was awarded 9.2 million dollars to work on three of the five categories of the CHIPRA Quality Demonstration Grant; A, C and D. North Carolina will be working with pediatric and family practices within CCNC to build on a strong public-private partnership that has documented successes in quality improvement, efficiency and cost-effectiveness of care for more than 14 years.

The following outlines current CHIPRA activities:

Category A – Core Quality Measures

- NC reported on 13 of the 24 core quality measures at the end of 2011 and hopes to report on 22 of the 24 measures by the end of 2012.
- Selected core quality measures are being integrating incrementally into CCNC's Quality Measures and Feedback (QMAF) reporting system. Eight pediatric preventative measures were added in 2011.
- In 2012, an EPSDT Pediatric Profile was developed in conjunction with DMA. The EPSDT Pediatric Profile provides rates for 12 EPSDT components at a state, network, and practice level each quarter via CCNC's Informatics Center.
- Pediatric Quality Improvement (QI) coordinators have been incorporated into each of CCNC's 14 networks. They have been trained by AHEC in QI and receive ongoing data and clinical training related to the core quality measures by the CHIPRA team each month. The QI coordinators are responsible for providing data, education and coaching to practices on core quality measures as well as additional pediatric QMAF measures. They are also working to coordinate pediatric teams in each of their networks (if none existed) in order to sustain pediatric initiatives that began with CHIPRA grant.

Category C – Provider Models enhancing care for children with special health care needs

- Eight networks and 26 practices (Cohort I-12 practices, Cohort II – 14 practices) are participating in a Learning Collaborative in order to enhance their Medical Home Model for children with special healthcare needs with a focus on social-emotional, developmental behavioral, and mental health.
- Each of the eight networks has one full time QI Specialist (QIS) to work intensely with practices. Each of these QIS' receives ongoing technical assistance from The Centers of Excellence for Integrated Care and each has received QI training from AHEC.

- Practices have learned to utilize tools such as the American Academy of Pediatrics Mental Health Toolkit, Motivational Interviewing, Common Factors Approach and valid screening tools for children ages 0-20.
- The Learning Collaborative has promoted the use of routine screens for children of all ages with special emphasis on maternal depression, autism, school-age and adolescent screens.
- CHIPRA has encouraged primary care providers and community service providers (specialists, local management entity (LME), CDSA, schools and public health) to build strong relationships, standardize communication and collaborate with one another to promote family-centered care.

Category D – Demonstrate the impact of the Model Electronic Health Record Format for children

- North Carolina and Pennsylvania are the two states chosen to evaluate the impact of the Children's EHR (CEHR) format.
- NC will assess the utility and functionality of the CEHR requirements for providers that care for children and evaluate improvement in quality indicators.
- NC will address the Model's adequacy to address gaps in current EHR products for pediatric care.
- CHIPRA category D will be part of CCNC's HIE pilot; discussions are ongoing as the NC HIE evolves.
- The CHIPRA team will be collaborating with NC REC to survey, educate and coordinate information and activities between EHR vendors and practices relating to the implementation of the CEHR format. Ongoing collaboration is occurring on the practice level to limit provider fatigue and streamline resources. REC staff is being identified and orientations are scheduled to introduce the Child Health Care Quality measures and NC's Model Format evaluation process.
- A national conformance assessment has been completed by AHRQ vendor Westat to determine the current ability of key vendors to meet the Model Format's requirements.
- To date CHIPRA Category-D has signed Memorandums of Understanding with three vendors (Office Practicum, ReLi Med Solutions, Patagonia Health) and has begun familiarizing them with NC's approach to the Model Format evaluation.
- Provider orientations have been scheduled and three participating practices have begun submitting their evaluations of the first set of requirements from the Model Format.
- Participating vendors have submitted estimates for interfacing with CCNC for automating delivery of clinical quality measure reports for the project.
- Several participating vendors have either implemented or are exploring "packaged solutions" such as CHADIS, a web-based screening, diagnostic and management system able to be interfaced with an EHR.

A.5.10 Office of Rural Health and Community Care

ORHCC works with communities to increase access to low cost, high quality health care. Since its inception in 1973, ORHCC has opened 86 community-owned, non-profit RHCs across the state. As of December 2012, ORHCC supports 28 RHCs with funding and technical support. ORHCC also helps to place medical, psychiatric, and dental providers in communities throughout the state. State and federal funding, along with technical assistance, enable communities to provide services to uninsured North Carolinians and agricultural workers. Rural hospitals also receive funding to encourage the development of innovative approaches to improve care at a lower cost. Qualifying patients may take advantage of drug companies' free and low-cost drug programs through ORHCC's medication assistance program.

ORHCC has several initiatives related to EHR adoption and HIE activities and a number of funding opportunities for rural and underserved communities, including:

- Assist underserved rural communities to provide accessible primary medical services for all persons regardless of their ability to pay. To receive financial support, these centers must participate in the Medical Access Plan to provide health coverage to low-income (less than 200 percent of poverty), uninsured residents. As requested, ORHCC provides technical assistance to RHCs related to financial and operational areas, including IT systems.
- Uninsured and Indigent Grants (Community Health Grants) improve access to health care services for NC's uninsured and indigent residents through a Request for Application process where non-profit primary care safety-net organizations such as CHCs, RHCs, local non-profit health centers, free clinics, public health departments, and school-based health centers may apply for funding.
- The provision of cost-efficient health care is increasingly tied to the ability to share timely information among health care providers. For health care safety net providers, this sharing of information will be accomplished through providers entering into agreements with a Qualified Organization (QO) to enable them to access and submit data in the NC HIE. To maintain access to appropriate, cost-effective care, it is critical for safety net providers to establish linkages with QOs. These linkages will also allow many safety net providers to qualify for the incentives offered through CMS' EHR Incentive Programs.
- Through CCNC, ORHCC often works collaboratively with DMA to fund innovative strategies to experiment and evaluate the use of new and existing quality measures for Medicaid patients. CNC organizes community health networks that are operated by community physicians, hospitals, health departments, and departments of social services and manages the local systems needed to achieve long-term quality, cost, access, and utilization objectives in the care management of Medicaid recipients.
- Health Resources Services Administration (HRSA)-funded State Health Access Program (SHAP) grant demonstration is built upon the infrastructure of CCNC's primary care medical home model in two pilot communities (Warren County and Pitt/Greene counties). CCNC for Uninsured Parents (CCNC-UP) provides uninsured parents of children with Medicaid or CHIP coverage with a limited benefit plan that includes a medical home and emphasizes primary care, prevention and chronic disease management. In August 2011, North Carolina requested a Change in Scope to its SHAP grant during the twelve-month no-cost extension period to utilize approximately $2.8 million in unobligated SHAP funds to undertake a number of unfunded projects around current efforts to increase access to coverage for the uninsured in North Carolina and to help prepare the state for implementing various provisions of the Affordable Care Act (ACA).
- In November 2010, the Office of the Controller's Purchase of Medical Care Services Unit, on behalf of ORHCC, began processing CCNC-UP network providers' claims and transferring enrollment, reimbursement, and utilization data by electronic extract to the CMIS. ORHCC staff collaborated with its partners to establish business rule specifications and processes for provider enrollment, claims processing, and reporting for CCNC-UP and HealthNet that align with Medicaid's plans for the new multi-payer MMIS system, NCTracks, in 2013.
- In 2012, ORHCC committed matching funds for a USDA Rural Utility Service grant for telemedicine in Hyde County, NC. The fiscal responsibility for this project is through the Ocracoke Health Center. This project will connect clinics in Ocracoke, Engelhard, and the Hyde County Health Department with specialty care, including behavioral health. The project has developed relationships with Albemarle Hospital in Elizabeth City, NC, Brody School of Medicine in Greenville, NC and with MCNC in Durham NC. MCNC is providing technology advice and broadband connectivity for the project.
- In 2013, ORHCC onboarded a full-time employee dedicated to helping FQHCs and RHCs meet Meaningful Use.

A.5.11 Other Stakeholder Activities

Academic medical centers, such as Duke University Health System, University Health Systems of East Carolina, University of North Carolina Health System, Wake Forest University Health Sciences, and other major hospital systems such as Carolinas Healthcare System, Mission Health Systems, Moses H. Cone Memorial Hospital, and Wake Med Health have invested in improving the capabilities of their integrated delivery networks (IDNs). They have created or are enhancing the medical coordination and quality monitoring functionality of their IDN systems' environments. This includes more data sharing, integration and communications capabilities of the main hospital systems with EHR capabilities of affiliated and non-affiliated medical practices within their respective medical trading areas. In many cases this communication uses a peer-to-peer communication methodology. Agents from these systems are well represented on the board of the NC HIE. These academia entities share a common vision of creating true HIE capability for the state.

A.5.11.1 North Carolina Medical Society and North Carolina Medical Society Foundation

The North Carolina Medical Society (NCMS) and the North Carolina Medical Society Foundation (NCMSF) continue to work with physicians, physician assistants, and statewide partner organizations to achieve improved patient care and outcomes.

Health Information Exchange

In 2011, NCMS has worked with stakeholders across NC and the Health and Wellness Trust Fund Commission (HWTFC) to incorporate physician recommendations regarding the HIE. Information regarding this collaborative effort is reported to the NCMS membership. In 2012, NCMS began working toward encouraging specialists to adopt and utilize the HIE to ensure quality patient care and decreased healthcare costs.

Electronic Health Record Loan Fund

The EHR Loan Fund Program was originally funded by the NC Health and Wellness Trust Fund. As of July 1, 2011, it is housed at NC DHHS within the NC Office of Health IT (OHIT), in partnership with the NCMSF and the Center for Self-Help.

Initially the program was targeted toward small, rural providers in Tier 1 counties, but in October 2011 the program was expanded to include any primary care practices committed to adopting, implementing or upgrading a certified EHR system and using it to achieve MU. The practices can participate in either the MU program for NC Medicaid or the CMS Medicare program.

The EHR Loan Fund received 20 applications. Of these applications, 11 were qualified and nine were not qualified for the program. Providers did not qualify if they were not primary care providers. Only one practice as of May 2011 qualified and completed the application. The practice decided to finance the EHR implementation with its own funding and did not continue the application process for a loan.

As of August 28, 2012, NCMSF has discontinued promoting funding through the EHR Loan Fund, at the request of DHHS. NC DHHS OHIT has submitted a proposal with a recommendation to repurpose the EHR Loan Fund to encourage and make available direct messaging to small, rural providers.

Provider and Practice Manager Education

Since 2010, NCMSF, in partnership with the NC Medical Group Managers Association, provides Webinars or "Lunch-Time Lessons" for providers and their staff. REC team members have provided three Webinar detailing the REC activities for more than 100 participants.

Information is provided at the NCMS Website which provides information on the REC, NC HIE and other HIT-related activities. Information is updated and included in North Carolina's weekly Medicaid Bulletin to more than 6,000 physician members.

Community Practitioner Program (CPP)

NCMSF provides loan repayment funding to 17 new primary care providers in rural underserved areas of NC. As of January 8, 2013, 25 providers have been funded with the requirement that their practices participate and commit to EHR adoption and to becoming a "patient-centered medical home." NCMSF will provide technical assistance and support free of charge to these practices to ensure their success as well as quality care for the patients in their practices (www.ncmsfoundation.org).

A.5.11.2 North Carolina Hospital Association

The NCHA is focused on helping hospitals and hospital-owned physician practices acquire broadband internet access. To ensure small and rural hospitals and safety net providers are not left behind in HIT adoption, NCHA supplies its members with educational opportunities regarding HITECH and MU. A wave of healthcare reform-related grant opportunities will likely bring additional projects to the attention of hospitals in the near future, and ongoing projects such as ICD-10 conversion, will continue to be important to NCHA and its member hospitals.

Expansion of NCHA Patient Data System

In an effort to enhance the patient data system (PDS) which was originally developed in 1987, NCHA launched a voluntary expansion of the Patient Data System (PDS) in November 2012 to provide additional services to hospitals and to promote improvement to the state's healthcare delivery system. The goals of this new capacity, called the **PDS+**, are aligned with those of the NCHA Strategic Plan and the Institute for Healthcare Improvement's (IHI) Triple Aim: to help hospitals promote healthier populations, better access to healthcare, and more affordable healthcare. PDS+ relies on voluntary participation by all hospitals and provides many benefits, but primarily for initiatives such as:

- Unique patient identifier: To link a patient across all hospital episodes of care for the first time.
- Quarterly statewide readmission report: To empower hospitals to fully participate in Hospital Engagement Networks such as the one run by NCHA's NC Quality Center, as well as Accountable Care Organizations and value-based purchasing programs. The PDS+, powered by a statewide unique patient identifier (UPI) that tracks patients across all hospitals, will help hospitals link the quality of patient care with the financial risks hospitals face as part of emerging models of care based on shared savings rather than volume alone.
- Medicaid Efficiencies: NCHA is committed to partnering with CCNC to improve the Medicaid delivery system in North Carolina, sustain the state's Medicaid program, and help all providers meet the state mandated Medicaid savings target. NCHA currently provides the majority of CCNC's near real-time clinical data using the NCHESS-IMC technology through the Medicaid Admission-Discharge Data Initiative. We currently deliver 14 data elements twice per day for 62 percent of Medicaid patients to CCNC, but with the PDS+ program hospitals will be able to provide a wider array of data elements for all Medicaid patients, in near-real time at a significant cost savings to the state, CCNC, and hospitals.
- Behavioral Health Reform: Inappropriate and excessive utilization of emergency departments (EDs) by behavioral health patients is a significant problem for hospitals. The NCHA advocacy team, hospitals, and Local Management Entity-Managed Care Organizations (LME-MCOs) receive quarterly behavioral health ED utilization reports through the NCHA ED Tracker to help measure this problem. In addition to the advocacy uses of this tool, it also supports hospital compliance with SL 2011-346 that mandates

reporting of data regarding involuntarily committed patients. PDS+ will automate the collection and reporting of this data in near real-time for case management by hospitals and LME-MCOs.

To build the PDS+, live ADT data from hospitals will be combined with the UPI and up to 36 months of historical claims PDS data to provide actionable, near real-time intelligence. PDS+ builds on the existing technology and experience of the North Carolina Hospital Emergency Surveillance System-Investigative Monitoring Capability (NCHESS-IMC) to deliver data to the NCHESS program and CCNC. Hospitals that do not have the NCHESS-IMC technology will be provided a Meaningful Use-certified data exchange platform that will allow them to participate in the CCNC ADT Initiative as well as the behavioral health reporting with PDS+.

Create Low-Cost Health Information Exchange Using Existing Technology

In the first quarter of calendar year 2011, NCHA developed the pilot of the North Carolina Healthcare Exchange (NCHEX), a voluntary, not-for-profit HIE that leverages existing technology installed as part of the North Carolina Hospital Emergency Surveillance System (NCHESS) project. NCHESS is a state-mandated emergency department data program to benefit the state's syndromic surveillance and epidemiological research efforts. NCHESS hospitals provide 25 percent of the data used by the CDC for their BioSense program. In June 2011, the NC DPH announced that NCHESS will be used by EHs to meet the MU syndromic surveillance objective as part of the Medicare and Medicaid EHR Incentive Programs.

NCHEX leverages the Integration Discovery platform from Truven Health Analytics, formerly Thomson Reuters Healthcare, and CareEvolution, whose HIE platform provides the majority of the technical infrastructure of the statewide exchanges for the South Carolina Health Information Exchange, West Virginia Health Information Network (WVHIN), and Alabama OneHealthRecord. NCHEX will provide HIE services to hospitals as well as affiliated and unaffiliated physician practices using the Integration Discovery platform, which has been certified in 2012 by the Drummond Group for 26 Stage 1 MU objectives and 15 clinical quality measures (CQMs). All participating clinicians will have a virtual Single Patient Record (vSPR) within their existing EHR. Non-participating providers will have access to the same information using a secure web browser.

NCHEX is standards-based and provides numerous features to all participants, including:

- Patient summary (demographics, allergies, problems, providers, procedures);
- Inpatient summary (36-most recent hours of hospitalization data);
- Reports (CCD, discharge summary, pathology, radiology, etc.);
- Lab Viewer (all available labs);
- Messaging (patient, provider);
- Real-time quality surveillance (disease and condition reporting);
- Eligibility reporting;
- Uploading of external documents;
- EMRLite and e-Prescribing (MU certified, SureScripts certified);
- Personal health record; and,
- Logging and auditing.

In addition to these features, the platform is also capable of:

- Public health reporting;
- Immunization registry reporting;
- CCD generation for use with external providers and HIEs;
- Nationwide Health Information Network (NwHIN) connectivity;
- Patient inquiry through the Continuity of Care Viewer by community physicians;

- Medication reconciliation;
- Clinical alerts; and,
- Never-event management.

In December 2011, NCHEX was in the pilot phase with the Cone Health and WakeMed health systems, which consists of seven hospitals, eight emergency departments and 57 hospital-owned physician practices. NCHEX had over 1.3 million unique patients in the system. There was no cost to pilot participants, and the goal of the pilot included providing standards-based access and data interchange capabilities for public health reporting, disease management for Medicaid and case management for safety net providers, and to build local collaboratives among providers using NCHEX to facilitate achievement of specific clinical goals.

As of January 2013, the NCHEX pilot has concluded. NCHA and First Health announced the launching of NCHEX for hospitals. The launch date is proprietary information.

Medicaid Admission/Discharge Data Initiative

In July 2010, NCHA, NC DHHS, and N3CN collaborated on the Medicaid Admission/+Discharge Data Initiative to enhance the coordination of care for Medicaid beneficiaries. The initiative built on existing care management efforts between hospitals and local community care networks and utilizes pre-existing hospital technology. NCHA, N3CN, and NC DHHS are working with Truven Health Analytics, formerly Thomson Reuters Healthcare, to collect 14 data elements from the hospital's ADT feed. This real-time data will collect pertinent Medicaid population information and gets captured and sent to N3CN's Informatics Center. The data feed will work off of technology already installed within the hospital and/or EHR system and there is no additional cost to hospitals to participate. The technology is known under several names including Care Focus, Clinical Xpert Navigator, and Mercury MD MData. The technology was widely installed in many North Carolina hospitals/systems with funding from NC DPH under the name North Carolina Hospital Emergency Surveillance System-Investigative Monitoring Capability (NCHESS-IMC). Local Community Care agencies will be able to access the Medicaid patient data directly from the Informatics Center pursuant to network system access agreements they have in place with N3CN.

Improve Patient Safety through Quality Reporting and Collaboration

The North Carolina Center for Hospital Quality and Patient Safety, a federally-designated patient safety organization (PSO), is leading our hospital quality improvement activities and will assist hospitals to understand and report quality measures required under sections 4101(a) and 4102(a)(1) of the HITECH Act. These Stage 1 measures are thought to be extractable directly from the CEHRT and should not require manual extraction or chart abstraction.

Per the Stage 2 Final Rule, six new core quality measures will now be required for EHs. These new measures are:

1. Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record;
2. Record electronic notes in patient records;
3. Imaging results consisting of the image itself and any explanation or other accompanying information are accessible through CEHRT;
4. Record patient family health history as structured data;
5. Generate and transmit permissible discharge prescriptions electronically (eRx); and,
6. Provide structured electronic lab results to ambulatory providers.

Support Small and Rural Hospitals in HIT Adoption

Over the past 25 years, NCHA has dedicated time and resources to assist hospitals with HIT education and EHR adoption, particularly for rural hospitals and CAHs who may not have the funding necessary to adopt and meaningfully use EHR technology. To ensure these small hospitals are not left behind the technology curve, NCHA works with ORHCC and the REC to create educational opportunities for these groups. In addition, NCHA connects small rural hospitals and CAHs with private funders and federal programs from ONC to get them the funding necessary to become meaningful users of EHRs. The Duke Endowment has funded comprehensive HIT strategic planning for 19 rural hospitals using the services of CSC. In addition, there are additional private grants currently under consideration. Using grant opportunities and relationships with qualified vendors through the NCHA Strategic Partners, NCHA, ORHCC and the REC will continue to work with these small rural hospitals in an effort of delivering important resources to its members.

Develop Strategic Partnerships with Qualified HIT and EHR Vendors

NCHA Strategic Partners is evaluating qualified vendors to provide value-based purchasing of HIT education, strategic planning, EHR selection and implementation services and health information exchange (HIE) to hospitals. NCHA is also communicating weekly with potential vendors to evaluate products and services to meet the needs of hospitals and physician practices.

Promote Better Connectivity among Providers

Fast and stable internet connections are essential for providers and hospitals if they are to be able to share clinical data and become meaningful users of EHR. Given the growing bandwidth needs, NCHA has partnered with the North Carolina TeleHealth Network (NCTN) to create a private statewide healthcare provider broadband network. The hospital phase of the project is known as NCTN-H and will provide an 85 percent discount for public and not-for-profit hospitals; other hospitals will be able to leverage a volume discount and join the network as well. Currently, 85 percent of NC licensed hospitals and 76 percent of all NC hospitals are registered and eligible to participate in the NCTN offering. As a sponsor of the NCTN-H, NCHA is reviewing a recent notice of proposed rulemaking (NPRM) from the Federal Communication Commission entitled "Rural Health Care Support Mechanism" to create a permanent discount program for broadband for public non-profit healthcare providers, modeled on the five-year funding mechanism of the NCTN program. In addition, the association is also supporting a new BTOP grant with MCNC and their NCREN program to bring high performance broadband to healthcare providers.

ICD-10 Collaborative

NCHA and NCMS are collaborating to help hospitals and providers tackle the issue of converting from ICD-9 to ICD-10. In 2012, NCHA cosponsored an ICD-10 education series extending over six months. NCHA has been engaged with the efforts of NCHICA, and in collaboration with NCMS, will seek to build on these types of activities. ICD-10 conversion will require massive changes to health information systems, business practices and provider workflows. The goals of NCHA and NCMS will be to identify educational opportunities, network with existing resources, identify qualified vendors to assist hospitals and physician practices with all aspects of conversion, and help track the progress of compliance.

Improve Public Health Surveillance

The North Carolina Bio-Preparedness Collaborative (NCB-Prepared) is a public-private partnership to develop, test and implement an advanced, nationwide bio-surveillance system. It is a collaborative effort of academic, government and industry leaders focused on developing a local, bottom-up approach to public health responsiveness and awareness. The initial partnership included UNC-CH, NC State University, SAS Institute and the U.S. Department of Homeland Security. The Collaborative has partnered with DPH to build on, and expand,

their nationally leading syndromic surveillance system with diverse new data sources and advanced analytics running on a cloud-computing platform.

The Collaborative is starting in NC to create a comprehensive statewide bio-surveillance system for analyzing data from a variety of health, food, social, environmental and animal sources to provide early outbreak detection and situational awareness of health events. It supports the health care community to better understand how the biosphere relates to disease activity and threats to human or animal health. It offers a clearer view of the day-to-day public health picture and support decisions and responses to protect and enhance lives.

With NC as the lab, NCB-Prepared utilizes the state's unique data sources, analytic capabilities, and computing infrastructure to:

- Enhance syndromic surveillance by working with local and statewide organizations to collect data from a variety of health, food, social, environmental and animal sources. Advanced analysis of this data allows for improved understanding of health patterns and more rapid and effective detection of threats to health.
- Improve situational awareness by providing a clear view of disease, environmental and health-related threats. It allows public health experts to differentiate between normal health patterns, environmental changes, and natural or manmade bio-threats. Improved situational awareness enables decision-makers to respond quickly and effectively to emerging and potential hazards.
- Better inform policymakers with accurate information generated by advanced data analytics to give policymakers a broadly based foundation of evidence critical to enacting measures that protect public health and safety.
- Gain deeper insight into the quality of healthcare systems built on a comprehensive data-drive approach supporting bio-preparedness leading to innovations across the healthcare spectrum, including improved patient care, streamlines day-to-day operations and better management of health resources.

The system uses a scalable cloud-computing platform based on NC State's Virtual Computing Lab (VCL) and UNC-CH's iRODS rule-based technology to support data quality and security with SAS analytics and portal software. The system will be developed to go beyond NC with a growing and scalable architecture, additional data resources, advanced analytics and enhanced presentation technologies to empower public health and preparedness officials to protect the nation's health.

As of January 10, 2013 NCHESS hospitals provide 93 percent of the data consumed by the state's bio-surveillance system and NCHA is participating in the Collaborative to offer strategies on how to provide more, and improved, data into the NCHESS system that could be of benefit to NCB-Prepared as well as the state's Medicaid analytics capabilities.

Behavioral Health Surveillance System

NCHA has developed two pilot electronic tools to measure hospital emergency wait times, and bed availability and referral data for behavioral health and substance abuse patients. Launched on June 13, 2011, the "bed board" is a real-time web application representing openings at 16 facilities with more than 650 behavioral health and substance abuse beds in the 38 counties in the eastern region. Launched in April 2012, the "ED Tracker" gathers data to estimate the wait times in EDs. The program tracks patients coming in, how long they wait and where they go after they leave the ED. The goal of these programs is to determine how to move patients out of EDs and into appropriate care settings in the community. Both programs rely on manual data entry by hospitals and providers of behavioral health and substance abuse services. Further evaluation will help determine if these

tools can, and should, be automated to provide more timely information to care providers and increase the quality of behavioral health and substance abuse care in the state.

A.5.11.3 North Carolina Healthcare Information and Communications Alliance, Inc.

In 2011, the North Carolina Healthcare Information and Communications Alliance (NCHICA) Board of Directors recognized that many of the transitions in automating healthcare information were well underway and recast the NCHICA mission to address future challenges:

> *"Assisting NCHICA members in transforming the US healthcare system through the effective use of information technology, informatics and analytics."*

NCHICA membership, composed of more than 220 organizations including government agencies, healthcare providers, payers, professional associations, and health IT partners, has demonstrated the value of collaboration in achieving this mission for the past 19 years. NCHICA has been a leader in incubating healthcare network initiatives for the state, including for the North Carolina Immunization Registry (NCIR) and the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). Both of these initiatives have been in uninterrupted operation for more than a decade. In support of the HIT activities underway in North Carolina since 2009, NCHICA and its members have been active on many fronts, including support of the following initiatives:

- eHealth Exchange (formerly called the Nationwide Health Information Network/NHIN/NwHIN Exchange project: NCHICA has been a participant in the eHealth Exchange project as established by ONC since 2005. NCHICA participated in both Stage 1 and Stage 2 of the national project. In addition, the NwHIN Gateway Project, an initiative to connect the 17 hospitals participating in the Western NC Health Network to the Charles George Veterans Administration Medical Center in Asheville, was facilitated with NCHICA's contract with ONC. Holt Anderson, NCHICA Executive Director, served as Vice Chair of the NwHIN Exchange Coordinating Committee, the national governance body for the Exchange Project. NCHICA continues to support the eHealth Exchange project in Asheville. The immediate focus is on improving the quantity and quality of the data being exchanged, enrolling more veterans into the system, and educating physicians and other providers about the availability of information regarding veterans they may be serving. Potential future scenarios include further connectivity to the NwHIN Gateway by public and private North Carolina-based entities and the incorporation of the Gateway into the NC HIE.
- Health Information Exchange (HITECH §3013) and Direct: NCHICA has been involved in the discussion of statewide health information exchange in NC since 2004, and was an active supporter of the NC Health and Wellness Trust Fund and its successor organization the NC HIE as the State Designated Entity to receive Federal funds to establish statewide health information exchange capabilities. Many NCHICA members are participating in the continuing work to implement the NC HIE to integrate information technology into clinical education and workforce development.
- NC REC (HITECH §3012): At the request of the Governor's Office in 2009, NCHICA formed a "Business Partner Alliance" and hosted an aggregation of interests in support of the NC REC. Several dozen NCHICA members and community members expressed a commitment to assisting the NC REC as it developed its strategies and tactics for assisting physician practices in achieving electronic health record systems that meet the requirements to receive ARRA HITECH incentive payments.
- NC HIT Workforce: NC's successful HIT Workforce development application was prepared with NCHICA consultation in 2009. NCHICA also facilitated connections with interested parties in other states that supported NC's leadership of the largest region in the US led by Pitt Community College and the NC Community College System.

- Strategic Health IT Advanced Research Projects (SHARP) and Beacon Community: SHARP and Beacon Community applications from NC were prepared by individuals who also are NCHICA members; and NCHICA consulted with most applicants on their approach and provided letters of support for all applicants.
- Telehealth/Telemedicine: NCHICA spearheaded the discussion on telehealth and telemedicine in NC in 1995 with support from NTIA, and has since been actively involved in related planning activities with representatives of such leading health organizations as UNC-Chapel Hill/UNC Health Care, ECU, Duke Health, Wake Forest Health, NC DHHS/DMA, MCNC, and BCBSNC. There is wide recognition that telehealth has the promise of improving the delivery of quality healthcare in rural NC and better utilization of the expertise that is centered in our larger institutions and metropolitan areas. To that end, NCHICA partnered with UNC-CH in hosting a Telehealth Workshop in Fall 2012 to bring stakeholders together to discuss the major issues and barriers facing NC. The Workshop resulted in a telehealth action plan and the creation of various new task forces.
- NCHICA Committees and Workgroups: NCHICA has numerous committees and workgroups that bring together key players and decision makers from among its members to tackle complex issues around implementation of HIT and HIE. Some examples include:
    - CIO-CMO-CMIO Roundtable: This group of hospital CIOs, CMOs, and CMIOs has met quarterly to discuss issues of concern since 2000. The NC Medicaid EHR Incentive Program presents program updates at the quarterly CIO Roundtable.
    - Informatics and Analytics Roundtable: This group, started in 2011, supports the collection of patient data and use of analytics to improve clinician workflow and patient care.
    - Enterprise Integration Workgroup: This new workgroup formed in 2012 discusses approaches for building standards-based interfaces to internal applications, as well as to external enterprises and health information exchanges.
    - Transactions, Code Sets, and Identifiers (TCI) Workgroup: This workgroup began in 1997 to develop methods for complying with the HIPAA administrative transactions regulations.
    - ICD-10 Task Force: Planning for this Task Force began in 2005, and has attracted national attention for its planned limited pilot for end-to-end testing of the ICD-10 codes to ensure that there is no interruption in cash flow when the transition from the current ICD-9 diagnostic codes takes place in October 2014. This task force was recognized as national example of a timeline.
    - Privacy and Security Officials Workgroup: This workgroup began in 1998 and has developed numerous sample documents and templates over the years to help organizations comply with the HIPAA and HITECH regulations.
    - NC Consumer Advisory Council on Health Information: This Council was formed in 2006 and serves to advocate for consumer rights related to health care, EHRs, personal health records and health information exchange.

NCHICA continues to provide a nationally recognized collaborative venue for encouraging clinical leadership, developing sound policy to protect patient privacy, and finding standards-based technology solutions while keeping the health and healthcare of individuals as the core focus of its multi-faceted activities.

A.5.11.5 NC Emergency Medical Services

The North Carolina Office of Emergency Medical Services (NC OEMS) is the state regulatory agency for Emergency Medical Services. Emergency Medical Services functions at the local level through 100 county-based EMS systems. These 100 EMS systems coordinate the service and care provided by the 540 EMS agencies and 36,000 EMS professionals functioning in NC. More than 1,400,000 EMS events occur in NC each year.

NC EMS regulations require an electronic patient care report to be completed on each EMS patient contact. This Pre-Hospital Medical Information System (PreMIS) is maintained through a contractual agreement by the EMS Performance Improvement Center (EMSPIC) at UNC-CH. EMS agencies are required by 10A NCAC 13P to complete an electronic patient care report and submit it into the PreMIS system within 24 hours of the event. EMS agencies can meet this electronic data submission requirement by using the free PreMIS Web-based data entry tool or through a commercial EMS data system which has been certified as a National EMS Information System (NEMSIS) Gold-Compliant vendor. The PreMIS system is based on the National EMS Data System standard adopted by all 56 US states and territories. As of January 2011, 26 different commercial EMS software packages are active within North Carolina.

The EMSPIC was established by the OEMS to provide technical support and assistance to EMS agencies and systems in the use of EMS data. The Duke Endowment funded the development of five EMS performance improvement toolkits based on the NC EMS Data Systems. The toolkits address key patient types or EMS events. The EMS toolkit topics include EMS response time, acute trauma care, acute cardiac care (ST-Elevation Myocardial Infarction (STEMI)), acute pediatric care, and cardiac arrest care. The CDC has also funded the development of an Acute Stroke Care toolkit. All six EMS performance improvement toolkits are now active with all 100 EMS systems.

In 2010, the NC OEMS and the EMSPIC focused on the linkage of EMS data with other existing NC data sources. The purpose of the linkage is to better describe, evaluate, plan, and improve the healthcare provided to the citizens of NC. At this time, NC OEMS and the EMSPIC are successfully linking EMS, emergency department, hospital discharge, trauma registry, stroke registry, STEMI registry, motor vehicle crash data, and medical examiners' data.

As of 2011, NC EMS Data System is currently exploring how EMS patient care reports could be provided to hospitals electronically, in an automated fashion, in exchange for more timely hospital outcome information. Unfortunately, EMS is not considered a part of healthcare in the federal HIT initiative and therefore is not eligible for HIT funding. The NC OEMS continues to maintain and enhance all data systems pertaining to medical record collection and regulatory data. This includes, but is not limited to, inspection reports and EMS certification records through the PreMIS, CIS, and State Medical Asset Resource Tracking Tool (SMARTT) applications. Additionally, the office will be completing the EMS Test Bank application by the end of 2011. This application allows the compilation of EMS examination questions and the ability to build EMS exams for difference certification levels based on the question pool. This will be used by members of the EMS Atlantic Council (of which North Carolina is a member) for any non-National Registry EMS exams.

As of December 2012, NCOEMS continues to maintain and enhance all data systems pertaining to medical record collection and regulatory data. This includes, but is not limited to, electronic Patient Care Records, inspection reports and Emergency Medical Services (EMS) certification records through the PreMIS, Credentialing Information System (CIS), and SMARTT applications. During December 2012, several new features were implemented to SMARTT applications.

These features include:

- Diversion Management**:** Makes it possible to divide entities (hospitals, EMS, and others) into diversion groups to improve communication of hospital service availability. All entities in the same diversion group receive notifications when a hospital places itself on diversion. Thresholds can also be set as to the number that can go on diversion for a particular service type. SMARTT tracks all diversion activity so that a record is kept and trends in activity can be analyzed.
- Drug Availability**:** Drug Availability tracking has been improved to assist the state office in determining what drugs are being carried by EMS agencies so that the extent of shortages can be

more accurately measured. Each agency can list which drugs they carry and the average number of adult doses they keep on hand for each. Note that drugs that would be used in the event of a bioterrorism event were already tracked in SMARTT.

- Emergency Chat**:** Allows all entities in an emergency activation as well as incident command staff to participate in a real-time text chat session with each other for the duration of the activation. The text from the chat is archived with the activation so it can be reviewed after the activation has concluded. This feature was implemented to enhance emergency communication between entities and with incident command.
- HavBED Version 3**:** SMARTT has been updated to submit HavBED Version 3 data to the Federal HavBED system.

A.5.11.6 State Chief Information Officer

Chris Estes, the SCIO, manages the NC Office of Information Technology Services (ITS). As SCIO, Mr. Estes has two primary areas of responsibility for information technology within the state. The first area is the establishment of statewide policy and technical direction. The second is to oversee the delivery of technology services for state agencies and other subscribers.

As a policy leader, the SCIO has participated in the statewide meetings of the Health Technology Consortium and its predecessor, the Governor's Task Force on Health and Information Technology. The SCIO also provided staff to act as subject matter experts for both groups. The Office of the State CIO (OSC) and ITS remain engaged in the HIT planning and policy establishment processes for the state of North Carolina.

In addition to the policy role, the SCIO also has an operational role. The ITS provides both mainframe and server-based hosting for State agencies and local governments; operates two large data centers, one in Raleigh and one in Forest City, NC; and provides application development services and a statewide voice and data network. In addition to the statewide network, ITS is also aligned with the work of MCNC and e-NC to provide broadband networks to rural NC.

In 2012, the OSC, in cooperation with ITS and several other state agencies, implemented an Enterprise Electronic Forms and Digital Signatures solution from DocuSign based on Session Law 2011-0145, House Bill 200, Section 6A.18. (a), which are expected to be leveraged for the NC Medicaid Incentive Payment System (NC-MIPS) application.

Depending on the requirements identified by DHHS and other client agencies, ITS is poised to provide direct services for the expansion of electronic health exchanges in NC. ITS, in cooperation with several state agencies, has also drafted and circulated a Cloud-Computing Strategy that was circulated to the Chief Information Officers Council.

A.6 Medicaid Relationships with Other State HIT/HIE Entities

DMA plays an important role in State HIT/HIE activities, but relies heavily on several other partners, including NC OHIT, OMMISS, the NC HIE, and others.

Prior to May 2013, DMA was represented on the State HIT Steering Committee and reports all HIT activities to the State HIT Coordinator, Dr. Steve Cline. Dr. Cline's position, Assistant Secretary for HIT, was created as a result of NC session law SL2009-0451, Section 10.27(b), which states that NC DHHS shall establish and direct a HIT management structure. Membership on the NC DHHS Integrated HIT Steering Committee has grown to include more than 36 individuals representing 13 different agencies, internal and external to state government.

All state-level partners, including DMA, provide quarterly written updates to the State HIT Coordinator's Office that fulfill the legislative requirement set forth in NC Session Law (SL) 2009-451, Section 10.27.(a) through (c), wherein NC DHHS must provide quarterly status reports on ARRA-funded HIT activities in North Carolina. In compliance with the statute, a report is provided to the Senate Appropriations Committee on Health and Human Services, the House of Representatives Appropriations Subcommittee on Health and Human Services, and the Fiscal Research Division of the NC General Assembly. See **Figure 1** for a visual representation of the state's HIT organizational structure.

Since May 2013, the OHIT office has been 100% vacant. A new OHIT Coordinator was hired April 2014.

A.7 Health Information Exchange

A.7.1 NC HIE

Coordinated planning for statewide HIE in North Carolina began in early 2009, when the North Carolina HIT Strategic Planning Task Force (HIT Task Force) was established to forge a new vision of how health and healthcare can be improved by enhancing the use of health IT.

On behalf of Governor Bev Perdue, the Director of the Office of Economic Recovery and Investment (OERI) charged the HIT Task Force to engage stakeholders to develop a set of strategic guidelines by which North Carolina could apply for, and most effectively use, resources made available through ARRA. The HIT Task Force was composed of 17 members; however, more than 65 subject matter experts, staff, and members of the public were invited to participate in the seven open meetings that were held from April through June 2009.

North Carolina's state government has examined the mechanisms and legal issues associated with assuring that the state retains appropriate oversight authority with respect to the statewide HIE. While it will be essential to maintain the integrity of the multi-stakeholder collaborative process in setting policy for the statewide HIE, it is also the case that the state has a non-delegable role as the steward of State assets and the protector of the public interest that must be preserved. As a result, there are specific provisions in NC HIE's Articles of Incorporation and bylaws that may not be altered, amended, or appealed without the governor's prior approval.

As noted above, the state of North Carolina participates in NC HIE's decision-making process. As an independent non-profit, former DHHS Secretary Lanier Cansler acted as Chair of the NC HIE Board. Additionally, the North Carolina State HIT Coordinator, North Carolina CIO, and North Carolina State Medicaid Director acted as ex-officio members of NC HIE. Under CCNC leadership, the NC HIE board of directors has been dissolved and replaced by five members of CCNC's board of directors. Those individuals represent physicians, hospital organizations, pharmacy and long-term care interests, and by virtue of CCNC, the interests of Medicaid and the state insured population.

The state also plays a significant role in supporting the coordination of HIE efforts. In June 2010, Secretary Cansler established the North Carolina Office of Health Information Technology (OHIT) and the new position of Assistant Secretary for Health IT. Led by Dr. Steve Cline, OHIT coordinates HIT efforts across state government and other key stakeholders across the state, as well as ensuring consistency with federal policy and initiatives.

Finally, through its provision, payment, and monitoring of healthcare and population health, North Carolina state government collects and distributes a wide range of administrative and clinical health information. Accordingly, state agencies are working closely with NC HIE to develop cost-effective strategies to share resources and make their systems available through NC HIE's statewide HIE network.

As noted below in the milestones, as of January 2013 NC HIE is undergoing a change in governance and a shift in program strategy. The future affiliation between NC HIE and N3CN is further explained in *Section B.2: Advancing the Objectives of HIE.*

Through a series of milestones noted in the timeline below, North Carolina rapidly organized stakeholders and launched a collaborative process to develop the strategic and operational plans to facilitate the development of the governance, technical, legal, policy, and financing infrastructure to support the expansion of interoperable HIE.

June 24, 2009: The HIT Task Force released Improving Health and Healthcare in North Carolina by leveraging federal health IT stimulus funds that outlined recommendations around the critical components of a successful health IT infrastructure and operations for a statewide HIE.

July 16, 2009: Governor Perdue signed Executive Order 19, charging the North Carolina Health and Wellness Trust Fund (HWTF) Commission with the responsibility for coordinating North Carolina's HIT efforts and creating the North Carolina HIT Collaborative to make recommendations to the Commission regarding the development of the "NC HIE Action Plan."

September 11, 2009: HWTF submitted a Letter of Intent to seek Cooperative Agreement funds on behalf of North Carolina. October 16, 2009: HWTF submitted Cooperative Agreement Application and "NC HIE Strategic Plan.

December 9, 2009: NC HIT Collaborative Privacy Workgroup released Briefing Paper: Developing a Statewide Consent Policy for Electronic HIE in North Carolina which addressed issues and making recommendations for next steps.

February 12, 2010: HWTF received Notice of Grant Award from ONC to fund HIE planning and implementation activities through 2014 and notification of approval of North Carolina State HIE Strategic Plan Version 1.

April 2010: A public-private partnership model to govern statewide HIE in North Carolina was recommended and approved; the NC HIE not-for-profit organization is incorporated.

May 14, 2010: The first board meeting of the new nonprofit, public-private partnership governance entity for NC HIE is held. The NC HIE Board of Directors is comprised of 21 CEO-level executives plus ex officio members from the state. The Board is co-chaired by NC DHHS Secretary Lanier Cansler and past CEO and Chairman of Glaxo, Inc., former CEO of Massachusetts General Hospital and healthcare advocate, Dr. Charlie Sanders.

Late May 2010: The NC HIE appointed multi-stakeholder Workgroups (Finance Workgroup, Legal and Policy Workgroup, Clinical and Technical Operations Workgroup, and Governance Workgroup) and drafts Workgroup Charters.

June 2010: NC HIE Workgroups began developing consensus-based recommendations to inform the Statewide HIE Operational Plan and to update the Statewide HIE Strategic Plan.

August 31, 2010: The NC HIE and HWTF submitted an updated Statewide HIE Strategic Plan and Operational Plan to ONC.

November 29, 2010: ONC approved North Carolina's Statewide HIE Strategic Plan and Operational Plan.

December 1, 2010: ONC transferred the Cooperative Agreement from HWTF to NC HIE.

December 22, 2010: Governor Perdue issued an Executive Order appointing the NC HIE as the State Designated Entity. Management and oversight of the State HIE Cooperative Agreement was transferred from HWTF to NC HIE. The process began within ONC to transfer the Cooperative Agreement to the NC HIE.

December 2010: HWTF in partnership with NC HIE and North Carolina Community Care Network submitted a completed application for the Challenge Grant.

January 27, 2011: ONC awarded HWTF a $1.7 million Challenge Grant to deploy medication management services.

First Quarter 2011: The NC HIE workgroups continued to meet focusing on the following: The Governance Workgroup's focus shifted to their primary tasks in this phase: 1) who will participate in the Statewide HIE; 2) rules and policies for participation; and 3) enforcement and oversight. The Finance Workgroup began focusing on developing the work plan for the ongoing sustainability effort. The Clinical and Technical Operations Workgroup began their efforts by focusing on these tasks: 1) refining the requirements for core and value-added services; 2) providing input on request for proposals; and 3) helping facilitate deployment and integration of HIE services into the health system. The Legal and Policy Workgroup focused on drafting consensus legislation that would facilitate an opt-out consent model for the exchange of patient information. April 1, 2011: ONC transferred the Cooperative Agreement to the NC HIE effective December 1, 2010.

April 25, 2011: The NC HIE released the request for proposal (RFP) for the technology service vendor to partner with the NC HIE in providing the technical services to execute the plan developed by the consensus of the wide array of healthcare interests in North Carolina. Over 30 vendors completed Letters of Interest with 17 vendor or vendor teams submitting formal proposals.

June 27, 2011: Senate Bill 375 – Facilitate Statewide Health Information Exchange passed both the House and Senate. It was signed into law by the Governor on June 27, 2011. The bill is designed to facilitate and regulate the disclosure of protected health information through the voluntary, NC Health Information Exchange (NCHIE) network. http://www.ncga.state.nc.us/Sessions/2011/Bills/Senate/PDF/S375v0.pdf

July 27, 2011: The NC HIE filed its application for tax exempt status.

August 2, 2011: After the highly structured review of the technology service proposals, the NC HIE and the Capgemini/Orion Health consortium executed a Master Development Services Agreement and related Statement of Work. NC HIE and the Capgemini consortium are working together to deploy the HIE infrastructure and on-board participants first quarter 2012.

August 9, 2011: ONC transferred the Challenge Grant to the NC HIE.

September 28, 2011: Blue Cross and Blue Shield of North Carolina (BCBSNC), in collaboration with the North Carolina Health Information Exchange (NC HIE) and Allscripts, launched the North Carolina Program to Advance Technology for Health (NC PATH)—a program created to place North Carolina at the forefront of healthcare reform. NC PATH will equip physicians with Allscripts EHR software and support, and connect healthcare providers across the state through NC HIE. Designed to meet the needs of both physicians and patients, NC PATH will move North Carolina into a new era of quality healthcare. The NC HIE will manage the program administration and facilitation as well as support all members of the healthcare community in North Carolina regardless of their EHR technology. BCBSNC is donating the cost for the implementation of an Allscripts EHR as follows: For in-network providers, BCBSNC will cover 85 percent of the software cost, support and maintenance costs and the NC HIE connectivity and membership fee for a period of five years. The provider is responsible for the remaining 15 percent. For free clinics, BCBSNC will cover 100 percent of the software cost, support and maintenance costs and NC HIE connectivity and membership fee costs for a period of five years.

March 1, 2012: NC HIE network goes live and connects a dozen independent primary care providers through the NC PATH partnership.

March 16, 2012: N3CN becomes the first Qualified Organization (QO) and will serve as an organizing entity to connect providers and hospitals with NC HIE.

March 31, 2012: North Carolina Community Health Center Association announces plans to connect safety net providers to NC HIE.

May 1, 2012: Solstas Labs and NC HIE partner to provide labs through NC HIE.

May 3, 2012: NC HIE received 501(c)(3) status.

July 30, 2012: NC HIE launches Direct Secure Messaging.

August 31, 2012 NC HIE completes NwHIN conformance testing.

September 7, 2012: LabCorp and NC HIE partner to provide labs through NC HIE.

October 8, 2012: NC HIE board of directors approved a merger proposal from N3CN.

December 10, 2012: N3CN board of directors approved the merger with NC HIE.

December 12, 2012: Halifax Regional Medical Center is the first hospital to go live on the NC HIE network.

February 1, 2013: The merger of CCNC and NC HIE is finalized. NC HIE becomes a subsidiary of CCNC and appoints Michael Jongkind of CCNC as interim CEO.A new board of directors composed of existing CCNC board members is established.

A.7.2 Other NC HIE Initiatives

Coastal Connect Health Information Exchange: Coastal Connect Health Information Exchange (CCHIE) enables the timely and secure exchange of electronic health information among disparate systems for the purposes of improving the quality, safety, and efficiency of healthcare and the overall health of eastern North Carolina's residents. CCHIE's *Patient-Centric Model* was developed by member hospitals of the Coastal Carolinas Health Alliance, CCHIE officially launched in 2009 as an independent nonprofit. As of January 2013, its geographic footprint spans 39 counties and represents more than 2.4 million lives. Connected hospitals include: Dosher Memorial Hospital, New Hanover Regional Medical Center, Pender Memorial Hospital, Sampson Regional Medical Center, and Southeastern Health.

> Physician-Directed Tools: A local Provider Needs Assessment indicated physicians' biggest need was to electronically access inpatient care documents and securely share them with fellow providers (affiliated and unaffiliated). These findings dictated product offerings: 1) **Results Delivery*:*** Enables hospital lab, radiology, and transcription documents to deliver instantly and securely to the iNexx inbox at connected community practices. Integration with practice EMR is available to deliver results directly into patient chart. 2) **Referral Tracking/Secure Communication*:*** Allows all connected providers to utilize the same tool to securely refer patients electronically including the transfer of clinical care documents. 3) **Patient** Summary Inquiry***:*** Provides quick and easy role-based query access for community providers and their practice staff to inpatient face sheets, patient demographics and care documents.
> Patient Benefits: Test results delivered quickly and securely for faster treatment and less time spent waiting. Better coordination between members of the care team results in less duplication of medical tests. More time spent with the provider and less time spent on paperwork. In case of emergency, ER personnel can access medical records across your community of care.
> Provider Benefits: Improved Treatment Outcomes with access to more comprehensive patient information, providers improve their ability to make well informed treatment decisions, quickly and safely. Improved Coordination of Care as connected providers can access accurate and up-to-date

information about a patient. Improved Efficiency in Practices with electronic referrals and communication with other providers improve workflow efficiencies, administrative costs and reduced duplication of medical tests. Access to Stimulus Funds as CCHIE supports local providers and hospitals in pursuit of federal Meaningful Use requirements established by HITECH and ARRA. For a current list of connected providers, please visit our website at www.coastalconnect.org.

Sandhills Community Care Network: The Sandhills Community Care Network is a regional component of the NC Community Care system which provides case management services to the Carolina Access Medicaid recipients in Harnett, Hoke, Lee, Montgomery, Moore, Richmond and Scotland counties. SCCN had proposed to build on this existing foundation to establish a community health information exchange but instead decided to support the NC HIE and build upon the statewide model for exchange.

Western North Carolina Data Link: WNC Data Link is a regional health information exchange (HIE) that links 17 hospitals in the western portion of North Carolina and the Veterans Affairs. Connection to the Charles George VA Medical Center via the eHealth exchange occurred in the summer of 2011. As of January 2013, WNC Data link has approximately 1,600 active users and 6,000 – 7,000 logins each month. One goal of WNC Data Link includes adding outpatient Medicaid history through interfacing with retail pharmacy databases. Medicaid was not involved in its formation and Medicaid does not provide data to the WNC Data Link; however, WNC Data Link and Medicaid are cooperating with efforts to develop a state-wide health information exchange (NC HIE).

A.8 MMIS and Current HIT/HIE Relations with MITA Assessment

NC DHHS, in collaboration with the selected vendor, CSC, is currently in the late testing phase of the Replacement MMIS, NCTracks. NCTracks and a new reporting and analytics solution include a data warehouse, decision support, business intelligence and fraud and abuse detection functionality. In 2010, it was stated in the original SMHP that part of the challenge for the HIT/HIE Project would be the ability to make modifications to NCTracks to support the HIT/HIE environment. Consideration for NC-MIPS and the NC Medicaid EHR Incentive Program have been a part of the NCTracks planning process, and it is expected that the NC-MIPS will be fully integrated with NCTracks for payment and provider data purposes in 2013. *Section C: Administering and Overseeing the EHR Incentive Program* describes this coordination in more detail. DHHS is also coordinating its efforts with the planned MITA transition which will result from the implementation of NCTracks.

A.8.1 Coordination of HIT Plan with MITA Transition Plans

DHHS is coordinating its HIT Plan efforts with the MITA transition plans for the Replacement MMIS. Additionally, DHHS recognizes that there is a synergistic connection between the HIT Plan and the MITA "to be" assessment, which will consider the state's goals for HIT when determining the future vision for the Medicaid and Behavioral Health Enterprises.

DHHS completed the MITA SS-A for the Medicaid Enterprise and the SS-A for the Behavioral Health Enterprise, focusing on the current and future (five and 10 years out) view of the business capabilities. MITA Framework 2.0 and 2.01 assessment tools define the capabilities for each Medicaid business process. The Substance Abuse and Mental Health Services Administration Behavioral Health MITA Version 2 assessment tools define these capabilities at a high level for Behavioral Health business processes.

The Office of MMIS Services (OMMISS) oversees the Replacement MMIS activities as well as the MITA SS-A. Division and OMMISS subject matter experts and management were consulted, as appropriate; to provide input and advice, and Division leadership was engaged to identify the future vision (over the next five and 10 years) for the Medicaid and Behavioral Health Enterprises.

The state used the SS-A process outlined in the MITA Framework 2.0 as a guide for the Medicaid assessment and performed the SS-A using the 79 MITA Version 2.01 business process templates and their associated business capability matrices. Additionally, the state developed new business processes as appropriate. The state's "as is" (current view) assessment for the Medicaid Enterprise was based upon the Replacement MMIS capabilities effective when the system goes live, as well as the new Reporting and Analytics solution, which is scheduled to be implemented simultaneously with the Replacement MMIS.

Because the Replacement MMIS is a multi-payer system which pays claims for Behavioral Health and Public Health programs in addition to Medicaid, the Behavioral Health SS-A, in addition to interviewing Behavioral Health personnel, included assessment of Replacement MMIS capabilities for Behavioral Health-only services, claims and providers and associated reporting and analytics requirements as appropriate.

To determine the future vision ("to be") for both the Medicaid and Behavioral Health Enterprises, the team engaged DHHS executive management and Division leaders to target business process and technical goals and objectives for Medicaid and Behavioral Health over the next five and 10 years. The team also used other resources for determining the department's future goals and objectives, including the MITA 2.0 Concept of Operations, the DHHS Business Plan, DHHS Strategic Plans, and approved future enhancements to the Replacement MMIS.

The output from the MITA SS-A, a comprehensive report of the state's assessment, was submitted to CMS and internal stakeholders on March 31, 2011.

A.9 Medicaid, HIE, REC and Health and Human Services HIT Coordination

Per the SL 2009-0451 of the NC General Assembly, NC DHHS, in conjunction with the SCIO and the NC Office of Economic Recovery and Investment, shall coordinate HIT policies and programs within North Carolina. The Department's goal in coordinating State HIT policies and programs shall be to avoid duplication of efforts and to ensure that each state agency and other public entity, as well as the private entity undertaking HIT activities associated with ARRA, leverage its greatest expertise and technical capabilities in a manner that supports state and national goals. This law also directs that NC DHHS shall establish and direct an HIT management structure that is efficient and transparent and that is compatible with the ONC governance mechanism. NC DHHS was further directed to provide quarterly written reports on the status of HIT efforts to the Senate Appropriations Committee on Health and Human Services, the House of Representatives Appropriations Subcommittee on Health and Human Services, and the Fiscal Research Division.

Prior to this session bill, the Secretary of the NC DHHS formed the State HIT Steering Committee (previously HIT workgroup) referenced above, to coordinate the department's work around HIT/E. This includes coordination among the several key ARRA funding programs, the State Medicaid HIT Plan, Section 3201 Funding, the HIE, Section 3013 Funding and the REC, Section 3012 Funding.

The State HIT Steering Committee includes representatives from DPH, DMA, CCNC, OMMISS, DMH/DD/SAS, DSOF, ORHCC, and the Office of the Secretary. Affiliated membership includes the NC HIE, the HIE Grant awardee, the REC grantee, the AHEC Program at the University of North Carolina, Chapel Hill, and NCHICA. Additional details about the AHEC activities in support of HIE and EHR adoption can be found in *Section A.5.2: Regional Extension Center: NC Area Health Education Centers*, *and* *Section A.10.2: DMA's relationship with the REC.*

The State HIT Steering Committee has established points of contact with key HIT agencies and organizations for the purpose of information sharing and coordination. Quarterly contact is made with these organizations and information will be included in this report as it is received.

In response to SL 2009-0451, DHHS has completed staffing the Office of the HIT Coordinator. Staff includes the HIT Coordinator, a privacy and security officer, a technical director and a full time program manager. The Office of the HIT Coordinator is responsible for monitoring and coordinating activities of all other state agencies and non-governmental organizations engaged with HIT and HIE activities, either of a planning, research or operational nature.

A.10 DMA and ONC-Funded Initiatives

There is a close relationship between DMA and NC OHIT. Medicaid also works tightly with the HIE Cooperative Grant awardee, now named NC HIE (a 501(C)3 organization), and with the REC grant awardee, a consortium of organizations whose lead agency is the NC AHEC, operated by the UNC System.

A.10.1 DMA's relationship to the State HIT Coordinator

The SL 2009-0451 of the NC General Assembly establishes the following:

Section 10.27.(a) states:

> *The Department of Health and Human Services, in cooperation with the State Chief Information Officer and the North Carolina Office of Economic Recovery and Investment, shall coordinate health information technology (HIT).*

SL2009-0451, Section 10.27.(b) states:

> *The Department of Health and Human Services shall establish and direct a HIT management structure that is efficient and transparent and that is compatible with the Office of the National Health Coordinator for Information Technology (National Coordinator) governance mechanism.*

The NC HIT Coordinator, Dr. Steve Cline, was appointed by the Governor and established in DHHS as a direct report to the Secretary of NC DHHS. Dr. Cline facilitates collaboration between DMA, DPH, OMMIS, DMH, N3CN, ONC, NC HIE, and other HIT/HIE stakeholders. Dr. Cline is also responsible for ensuring that ARRA-related activities are coordinated among the various ARRA grant awardees, including several non-governmental agencies, and exploring opportunities for leveraging additional financial assistance from other (non-ARRA) federal programs.

Medicaid reports to Dr. Cline in his role as HIT Coordinator and works with his office (OHIT) to ensure the SMHP reflects the current state of HIT/HIE activities statewide. Medicaid also tightly coordinates its efforts for administrating the EHR Incentive Program with Dr. Cline, the REC, and NC HIE. OHIT and DMA HIT Team leadership meet bi-weekly to review program goals and discuss critical issues.

Since May 2013, the OHIT office has been 100% vacant. A new State HIT Coordinator was hired April 2014.

A.10.2 DMA's relationship with the REC

The AHEC Program serves as the NC REC for HIT. The goal is to reach at least 3,465 priority primary care physicians and assist with practice assessment, workflow redesign, selection and implementation of EHRs to achieve MU of the technology and improve health outcomes throughout the state.

NC AHEC has expanded its consulting workforce to 40 EHR-experienced professionals to serve the nine regions of the state defined in its grant application. This will better enable NC AHEC to help practices implement technology and/or use their previously existing technology; thereby, meeting the federal standards of MU and administering incentive payments from the CMS between 2011 and 2015.

The Cooperative Agreement with ONC for health information technology provides payment to the NC REC upon specified milestones achieved in the practices. A training mechanism for these new staff members has been built with assistance from the REC subcontractors at CCME, NCMSF and IPH.

As of 2005, CCME possesses extensive knowledge of EHR vendors and has begun aiding practices with their EHR implementations. As part of their sub-contract, CCME is engineering a website and a tracking tool to provide NC REC resources for tracking the progress of each practice through the necessary steps of readying for the selection and implementation of a certified EHR. NCMSF also leverages its expertise to help rural communities technically and financially in the effective implementation of new innovations.

IPH's primary role as a sub-contractor of the NC REC is to aid public health departments with their implementation of EHRs, and to ensure the departments meet the MU standards.

NC REC understands there are several barriers to EHR adoption—especially cost—and it has developed strategies to address barriers within the small practices. These strategies include: collaborating with other small practices; group purchasing; quarterly meetings to discuss lessons learned; engaging in programs such as NC PATH; and, actively participating in the building of the EHR Loan Fund.

DMA will share information with the REC by collaborating with NC AHEC. CCME is one of three REC subcontractors including NCMSF and IPH. Information exchange between DMA, CCME, NCMSF and IPH will be facilitated for DMA through AHEC. Regularly scheduled meetings between DMA and AHEC are planned to leverage outreach and educational opportunities. DMA will work with the REC by sharing information on EP and EH enrollment statistics and trends, risks and issues and training and outreach schedules.

A.11 Current Innovations – Affecting the Future Direction of EHRs

DMA is actively participating in the statewide effort to support the utilization of CEHRT through its membership in the DHHS HIT Steering Committee, its tight coordination with NC HIE, and by leveraging physician participation in the CCNC medical home model. In particular, CCNC and its governance structure—N3CN—are at the forefront of innovation related to MU of CEHRT.

A.11.1 Community Care of North Carolina

Established in 1998, Community Care of NC (CCNC) is a partnership between NC DHHS and 14 independent community health networks across the state covering all 100 NC counties. More than 4,000 physicians work closely with CCNC's networks, to provide a primary care medical home for over one million NC Medicaid recipients and over 55,000 uninsured North Carolinians. CCNC networks bring local doctors, hospitals, public health departments, mental health agencies and other community providers together to improve care and save money for Medicaid and other state and local programs. Networks provide resources to practices to promote quality improvement and evidence-based care; as well as population management, care management, and pharmacy consultation services; toward the overarching aims of quality improvement and cost containment. CCNC is an award-winning, innovative program unlike any other in the US.

Since its beginning in 1998, Community Care has used performance measurement and feedback to help meet its goals of improving the quality of care for Medicaid recipients while controlling costs. Quality measurement is intended to stimulate or facilitate quality improvement efforts in CCNC practices and local networks, and to evaluate the performance of the program as a whole. Under the direction of the Clinical Directors, this measurement and feedback process has evolved over time to meet the changing needs of the program. Several factors necessitate a continuing need to evolve, such as 1) expansion of Community Care's enrolled population and increasing focus on aged, blind, and disabled patients with multiple chronic conditions, 2) practice participation in other quality initiatives and desire that measures be aligned as much as possible, and 3) changes

to evidence-based clinical practice guidelines over time. A Quality Measurement and Performance workgroup, with representation from all fourteen (14) networks, meets periodically to review performance measures. Goals are to identify measures with: 1) clinical importance (based on disease prevalence and impact, and potential for improvement), 2) scientific soundness (strength of evidence underlying the clinical practice recommendation; evidence that the measure itself improves care; and the reliability, validity, and comprehensibility of the measure), and 3) implementation feasibility. Workgroup recommendations are presented to the CCNC network leaders, and final measures are chosen by vote of the Clinical Directors.

As of January 2009, patients are eligible for chart review on the basis of asthma, diabetes, ischemic vascular disease, and heart failure. Chart review measures pertain to: appropriate asthma management; diabetes glycemic control and foot care; management of blood pressure, cholesterol, and tobacco use; appropriate aspirin use; and assessment of LV function in heart failure. Community Care has contracted with Area Health Education Centers (AHECs) to perform independent randomized chart reviews for >26,000 recipients in >1325 CCNC practices, with an electronic data abstraction tool. Practice-level results with patient-level detail are available to the networks by secure internet reporting services on a next-day basis. Program-level results are reported annually.

An additional set of quality of care measures are derived from Medicaid claims data, pertaining to: medication therapy for asthma, heart failure, and post-MI patients; adult preventive services (breast, cervical, and colorectal cancer screening); and pediatric preventive services (dental care and well child exams). Claims measures are reported quarterly at the practice, county and network level. A "care alert" system was released in the fall of 2010, which scans historical claims data on a weekly basis to readily identify patients in default of recommended services. Care alerts are posted within the patient record on Community Care's secure web-based Provider Portal; and as panel based reports for primary care practices providing medical home services.

A critical element to Community Care's success centers on the ability of the networks to locally implement system changes needed to improve quality in practices. The network Clinical Directors are instrumental in engaging community providers to implement the quality initiatives. Providing credible and provider friendly reports are powerful tools, particularly when accompanied with benchmarks and comparisons to peers, helping to motivate providers to improve processes that will enable them to provide best care. The focus is on implementing evidence-based best practices in the medical home.

Table 14 below provides a detailed summary of CCNC Quality Measures.

Condition	Measure	Source
Asthma	Continued Care Visit with assessment of symptoms	Chart Review
	Action Plan	Chart Review
	Assessment of environmental triggers	Chart Review
	Appropriate pharmacological therapy	Chart Review
	Suboptimal control (beta agonist overuse)	Claims Review

Condition	Measure	Source
	Suboptimal control and absence of controller therapy	Claims Review
	Asthma ED visits per 1000 asthma member months	Claims Review
	Asthma Hospitalizations per 1000 asthma member months	Claims Review
Ischemic Vascular Disease	Aspirin use	Chart Review
	Smoking status and cessation advice	Chart Review
	BP Control <140/90	Chart Review
	Lipid Testing	Chart Review
	LDL Control	Chart Review
Hypertension	BP Control <140/90	Chart Review
	Smoking status and cessation advice	Chart Review
Diabetes	A1c testing	Chart Review
	A1c control <8.0percent(good)	Chart Review
	A1c control >9.0percent(poor)	Chart Review
	Lipid Management <100 mg/dL (good)	Chart Review
	Lipid Management >130 mg/dL (poor)	Chart Review
	BP Control <130/80 (good)	Chart Review
	BP Control >140/90 (poor)	Chart Review
	Foot Exam	Chart Review
	Smoking status and cessation advice	Chart Review

Condition	Measure	Source
	A1C testing	Claims Review
	Eye Exam	Claims Review
	Cholesterol screening	Claims Review
	Nephropathy screening	Claims Review
	Use of ACE/ARB for patients with DM and HTN	Claims Review
Heart Failure	LVF documentation	Chart Review
	ACE Inhibitor/ARB Therapy	Chart Review
	Beta Blocker Therapy	Chart Review
	Smoking status and cessation advice	Chart Review
	Left ventricular function (LVF) assessment	Claims Review
	Heart Failure Admissions	Claims Review
	Heart Failure 30 day readmissions	Claims Review
Adult Preventive Services	Breast cancer screening (mammography)	Claims Review
	Cervical cancer screening (pap smear)	Claims Review
	Colorectal CA screening	Claims Review
Pediatric Preventive Services	Dental Topical Fluoride Varnishing	Claims Review
	Annual Dental Visit (ADV)	Claims Review
	EPSDT VISIT (W15) Well-child visits in the first 15 months of life	Claims Review
	EPSDT VISIT (W34) Well-child visits in the Third,	Claims Review

Condition	Measure	Source
	Fourth, Fifth and Sixth Years of Life	
	EPSDT VISIT (AWC) Adolescent well-care visits	Claims Review

Table 14 - CCNC Quality Measures (2011)

A.11.2 North Carolina Community Care Networks, Inc. (N3CN)

N3CN is a non-profit entity comprised of and governed by its constituent 14 community-based CCNC networks. N3CN hosts an electronic data exchange infrastructure maintained in connection with healthcare quality initiatives for the State of North Carolina sponsored by the Department of Health and Human Services Division of Medical Assistance, Office of Rural Health and Community Care, and the United States Department of Health and Human Services Centers for Medicare & Medicaid Services. Currently, the Informatics Center contains healthcare claims data provided by Medicaid, as well as health information about program participants obtained directly from healthcare providers and care managers and/ or the primary care medical record. Additional data sources include: Medicare claims and Surescripts pharmacy data for dually eligible providers in the 646 demonstration program, laboratory results from Labcorps and UNC Healthcare, and real-time hospital admission/discharge/transfer data from 48 large NC hospitals. Additional hospitals and practices will be contributing clinical data into the N3CN clinical data repository in 2012. Information is accessed by the Community Care networks and providers to identify patients in need of care coordination; to facilitate disease management, population management, and pharmacy management initiatives; to enable communication of key health information across settings of care; to monitor cost and utilization outcomes; and to monitor quality of care and provide performance feedback at the patient, practice, and network level.

All Informatics Center (IC) applications are built using Microsoft .NET technology, and available to authorized users via the Internet using a secure socket layer. User access to applications and reports is handled in several ways to insure multi-level security. With Windows Active Directory the IC manages a complex permission tree to restrict user access to the applications or reports they are entitled to see. All sites maintain audit logs of the users' access to the application and the data reviewed or comments modified. Applications and data bases reside on one of nine Dell Servers housed at a climate controlled data center in Raleigh. Storage is handled by a redundant array of independent disks (RAID 10). Servers are owed by N3CN but reside at Hosted Solutions, a SAS 70 Type II certified data center. Hosted Solutions has secured access with 24-hour on premises staff to monitor the site. Hosted Solutions provides a redundant power supply and redundant telecommunications capabilities, complex firewalls and encrypted telecommunication lines. All servers are backed up regularly as are all application.

Informatics Center Functions and Front-End Applications:

Care Management Information System (CMIS): CMIS originated in 2001 as a Microsoft Access database in a single CCNC network, designed for care managers to make administrative and therapeutic notes. It evolved into a web-based portal accessible to all networks, allowing care managers to maintain a health record and single care plan that stays with the patient as he or she moves from one area of the state to another. With support from the Foundation for Advancement of Healthcare Programs, CCNC contracted with an external developer to establish an import of Medicaid enrollment and claims data on a monthly basis, to populate the CMIS patient record with demographic and primary care provider information,

and a view of the individual's hospital, ED, and pharmacy claims. In addition, networks were able to utilize CMIS to manage enrollment, eligibility and care management services for HealthNet projects across the state, which are regional collaboratives for the care of the uninsured, currently serving 12,500 enrolled individuals. Thus CMIS enables a continuity of care record for patients as they migrated "in and out" of Medicaid, Health Choice (North Carolina's CHIP program) and un-insurance. CMIS provides a standardized framework for care manager workflow management and documentation, incorporating tools for patient assessment, goal setting, and health coaching.

In 2009, N3CN transitioned the CMIS system within the IC environment to be sourced from the IC data warehouse. This allowed for greater developmental flexibility and the opportunity to exchange information across IC applications (for example: care management data fields may be visible through the Provider Portal, or available for reporting in the Reports Site; while chart audit reports may be retrieved within the CMIS patient record). As the CCNC Chronic Care program evolved, care management tools could readily be incorporated into the CMIS system. Important enhancements included a comprehensive health assessment and functional assessment tools, as well as disease-specific screening and monitoring modules. Bulk task capacity was added to allow for population-level interventions (for example, to send a flu shot reminder to all patients with diabetes). A secure messaging feature allowing 20 MB attachments was added to allow care managers to communicate patient health information securely to primary care providers or others involved in the patient's care outside of the CMIS system. Report-designing capacity was built within CMIS to allow managers to more closely monitor the caseload and activities of the care management workforce. In 2011, over 800 new CMIS users from local health departments statewide were given access to CMIS, to allow for a coordinated care management record for pregnant women and children with special healthcare needs receiving case management services in those settings. As of November 2011, 1,614 care managers statewide use this care management platform, working with over 100,000 patients every month.

Pharmacy Home*:* The Pharmacy Home Project was created to support CCNC pharmacy management initiatives, and addresses the need for aggregating information on drug use and translating it to the network pharmacist, case manager and primary care provider in a manner best suiting their care delivery needs. To accomplish this charge, N3CN initially set up a monthly extract of pharmacy claims history from the claims data warehouse to be housed within our own CCNC environment. Extraction, Transformation, and Load (ETL) processes were written to prepare data and load it into the application database from which prepared data could be readily pulled into front-end views of patient prescription history or user-generated population-level reports. In addition, ETL processes applied logic to create derived variables indicating adherence calculations, gaps in therapy (days elapsed since the most recently dispensed pill supply would have expired), and other clinical care alerts (e.g. indicator of beta agonist overuse, which may indicate poor asthma control). From the application database, the system was set up to provide a patient level profile and medication history for point-of-care activities, as well as a population-based reports system to identify patients that may benefit from pharmaceutical care delivery via pharmacists, case managers and PCPs in the medical home. The Pharmacy Home drug use information database is used prospectively for multiple purposes: for medication reconciliation; identification of care gaps and problem alerts; targeting of at-risk patients; development of the pharmaceutical care plan; and proactive intervention to assist providers and patients with therapeutic substitution required by state Medicaid policy. Retrospective uses of the Pharmacy Home database are equally important, to enable efficient and timely analyses needed for continuous quality improvement and program evaluation.

N3CN is a sub-awardee of a Challenge Grant from the Office of the National Coordinator for Information Technology to build on N3CN's existing Pharmacy Home application. Under this grant, the North Carolina Health Information Exchange will charge N3CN with enhancing the existing "Pharmacy Home" application to connect it to the NC HIE as a value added service to encompass all payers and providers. By project completion, the NC HIE will be the primary inbound source of the disparate medication lists from multiple settings and systems to the application, as well as the conduit for outbound communication with NC HIE participants, including a provider's own electronic system of record. The Pharmacy Home will then act as a node on the NC HIE to provide a "common view" of all available medication lists. This enhance set of aggregated information will greatly enable medication reconciliation efforts and also enable more valid decision support.

Quality Measurement and Feedback Chart Review System: Chart audit, quality measurement and performance feedback has always been an integral component of CCNC's clinical quality improvement initiatives. Despite rapid growth in CCNC enrollment and number of participating practices, CCNC clinical leaders have remained committed to the monitoring of quality at the individual practice level, to engage providers in the quality improvement process and to monitor progress at the practice, county, network, and statewide level. As the CCNC program expanded to serve a larger population with multiple complex comorbidities, a broader array of quality measures was adopted, based on evidence-based care guidelines for diabetes, asthma, hypertension, cardiovascular disease, and heart failure. N3CN now conducts over 26,000 medical record reviews in over 1250 primary care practices statewide on an annual basis. To manage the expanding scope of the chart review process, N3CN moved from a paper chart abstraction tool to a fully electronic, streamlined system in 2009. Medicaid claims data is used to generate a random sample of eligible patients and to pre-populate audit tool elements according to an individual's identified chronic conditions (**Figure 11**). Secure client-server software allows independent auditors to work offline when Internet access is not available in the clinic location. When access to Internet is available, the system automatically synchronizes data with the server. Data is fully encrypted offline and in transit. Data sent to the server automatically updates a variety of process, progress, and analysis web-based reports. Practices and CCNC networks then have immediate access to chart review results through a secure web-based report site, with patient-level information as well as practice, county, network, and statewide results with national comparative benchmarks.

Informatics Center Reports Site: The IC Reports Site was created to allow the efficient and secure distribution of reports through a secured web-based report access and management application, with report access permissions determined by the appropriate scope of access of individual users. Network-level administrators authorize their own employees and providers by customizing their scope of access by practice or region. A report built at the statewide level can be readily distributed according to the permission tree structure, such that only the appropriate patient information is visible to each end user. Initially, most reports distributed through the Reports Site were created by data analyst staff querying the claims data warehouse or IC data warehouse using SAS, to create an underlying data table for the specific report. IC could then create a web-based report in RDL (report definition language – Microsoft standard format for web-based reports) format, pointing to the data in that underlying data table. Publishing the RDL reports through the Report Publisher (a custom-made Windows-based application) would then automate the process of separating the data and publishing report instances customized to networks, regions, and practices according to the permission tree. Over time, the report code is being translated into SQL and ETL processes are being established to allow extracting data directly from the IC data warehouse and loading it into the reports underlying data tables. All reports are printable and can be exported into PDF or Excel format. In 2011, N3CN expanded its reporting capacity to provide secure

analytics and reporting services for local health departments and for Local Management Entities who provided population management services for the behavioral health population.

Informatics Center Provider Portal: The Informatics Center Provider Portal was released in August of 2010. This portal was built with the treating provider in mind, offering elements of CMIS, Pharmacy Home, and the Reports Site, tailored to the target user. Through a secure web portal, treating providers in the primary care medical home, hospital, emergency room, or mental health system can access a Medicaid patient health record which includes patient information, care team contact information, visit history, pharmacy claims history, and clinical care alerts. Importantly, the use of Medicaid claims data provides key information typically unavailable within the provider chart or electronic health record. For example, providers are able to see encounter information (hospitalizations, ED visits, primary care and specialist visits, laboratory and imaging) that occurred outside of their local clinic or health system. Contact information for the patient's case manager, pharmacy, mental health therapy provider, durable medical equipment supplier, home health or personal care service provider is readily available. Providers can discern whether prior prescriptions were ever filled, and what medications have been prescribed for the patient by others. Built-in clinical alerts appear if the claims history indicates patient may be overdue for recommended care (e.g., diabetes eye exam, mammography).

The Provider Portal also contains key resources for assisting providers in the management of Medicaid patients, such as a compendium of low-literacy patient education materials, and practice tools for risk assessment and disease management. Through a seamless link into a licensed service maintained by an outside partner, providers can retrieve medication information for patients in multiple languages, in video or print format. Medical home providers may directly access population management reports and quality metrics for their own patient population through a seamless link into the Informatics Center Reports Site.

As of December 2012, 2,174 providers were using this Portal, accessing information for over 35,000 patients per month.

Various functions are served by N3CN's analytics and reporting capacity, including:

- ***Population Needs Assessment: Identification of demographic, cost, utilization, and disease prevalence patterns by service area.*** The CCNC Chronic Care patient database is updated quarterly to reflect the current aged, blind, and disabled Medicaid-enrolled population, containing over 80 data elements. Network leaders can readily obtain information about the demographic characteristics, prevalence of chronic medical and mental health conditions, spending by category of service, and rates of hospital, ED, and other service use within their county-level service areas. This aids in program planning and resource allocation; identification of outlier patterns (such as unusually high rates of personal care services); and tracking of local utilization patterns over time.

- ***Risk Stratification, Identification of High-Opportunity Patients, Patient-level Information***. The size and complexity of the Medicaid population, in terms of physical health, mental health, and socioeconomic needs, necessitates intelligent mechanisms for identifying patients most appropriate for care management interventions, particularly in the face of limited resources. The use of historical claims data to screen patients for care management intervention can greatly improve the efficiency of the care team. N3CN provides networks and primary care medical homes with an enrolled patient database, updated quarterly, containing over 90 data elements related to cost, utilization, and diagnoses, and risk profile. A comprehensive patient-level view of this information is available in a searchable Chronic Care patient snapshot database, which facilitates triage when referrals are made for care management by

providers or at the time of hospital discharge. Similar reports are generated for specific initiatives or pilot programs (for example: identification of patients with newly diagnosed asthma, heart failure, and diabetes; identification of patients receiving controlled substance prescriptions from multiple sources; identification of patients with poor adherence to their blood pressure medications for a telephonic health coaching intervention).

Within that database, patients can be flagged who meet specified criteria for further screening by a care manager, according to patterns of service use over the prior 12 months. Clinical Risk Group (CRG)-risk adjusted analytics are applied to improve the accuracy of monitoring cost and utilization metrics over time, and to improve efficiencies in identifying patients most appropriate for care management services. 3M-developed methodologies are used to identify potentially preventable hospital admissions, readmissions, ED use, and ancillary services, to more accurately identify patients and areas where costs and utilization are higher than expected, accounting for patient acuity. Network care managers are alerted to these patients to implement targeted interventions. In addition, we flag patients within this priority population who meet criteria for mental health case management, and other high-risk individuals appropriate for specific initiatives or programs under the auspices of partner agencies, in order to best leverage external case management resources and coordinate care.

- ***Monitoring of ED and Inpatient Visits.*** A number of detailed utilization reports are generated automatically from the IC data warehouse, updating with every claims payment cycle. These can be easily navigated by local managers and clinicians who may not be highly technically savvy. As an example, the user can readily access a listing of ED visits by their enrolled population. The report can be parameterized by hospital, PCP, or patient or visit characteristics; and can tally visit counts by patient or practice. A similar report is available for inpatient hospitalizations. These reports are very flexible for answering a variety of questions (e.g., Are patients from my clinic having a high number of non-emergent ED visits during regular office hours? How many heart failure discharges were readmitted within 30 days, and did they bounce back to the same facility or a different location?); and for identifying at-risk patients in a timely fashion (e.g., here is a list of all patients with an asthma-related ED visit, let's make sure they have a follow-up PCP visit scheduled).

  Additionally, through the joint efforts of CCNC, NC DHHS, and the NC Hospital Association, N3CN is now receiving twice-daily notification of Medicaid population inpatient and ED visits from 48 NC hospitals, with additional hospitals in development. This real-time notification greatly facilitates the identification of patients in need of care management support as they transition from hospital to home, including pharmacist review of medications and follow-up in the primary care medical home.

- ***Tracking of Care Quality Indicators***. In addition to the quality measures tracked in the annual chart review process, N3CN is able to track a number of quality measures using claims data alone, with quarterly updates. Measures can be aggregated to the practice, county, network, or statewide level. Results can be viewed in spreadsheet format for easy comparative view across practices, or as a comprehensive practice-level, county-level, network-level, or program-level report with trend information. Reports include measures related to diabetes, asthma, heart failure, cardiovascular disease, pediatric well visits and dental care, and adult breast, cervical, and colorectal cancer screening.

- ***Program Evaluation and Tracking of Key Performance Indicators***. The IC Reports Site also enables program performance tracking for monthly reporting to the state Medicaid agency and state legislature.

Tracking of key metrics provides stakeholders with assurance that efforts are aligned toward the overarching goals of cost savings and quality improvement, and that all networks are held accountable for the overall performance of the program. Key indicators include both process measures (such as percent of targeted hospitalized patients receiving medication reconciliation) and outcome measures (such as hospitalization, ED, and readmission rates).

A.12 State Law and Regulatory Changes to Support the EHR Incentive Program

A close review of North Carolina state statutes that affect healthcare providers' disclosure of patient information found a number of laws that were outdated, ambiguous, and out of alignment with the federal HIPAA Privacy Rule. In an effort to harmonize NC state laws with HIPAA and to facilitate the use of secure electronic exchange of patient information in a manner consistent with HIPAA, the 2011 General Assembly enacted two bills, SB 375 and SB 607. SB 375 establishes the "North Carolina Health Information Exchange Act," which is codified in Article 29A of Chapter 90 of the NC General Statutes. The Act regulates the use of the voluntary statewide HIE Network in a manner consistent with HIPAA Privacy and Security Rule. SB 607 made conforming changes to specific sections of existing North Carolina law that were identified as barriers to MU of electronic HIE.

A.13 HIT Activities Crossing State Borders

North Carolina borders four states: Virginia, Tennessee, Georgia, and South Carolina. It shares significant medical trading areas on the borders of Virginia and South Carolina. As North Carolina develops its health data exchange policies and technical services, it is considering alignment opportunities with neighboring states driven by:

- Data exchanges that naturally flow across state borders;
- Opportunities for shared HIE infrastructure design and development;
- Cross-border provider Medicaid incentive determinations; and,
- Approaches to provider adoption of EHRs.

North Carolina partners with other states around HIT/HIE, including:

- In April 2010, the states of Tennessee and Alabama formed the Southeast Regional HIT-HIE Collaboration ("SERCH") to serve as a forum for discussion among bordering states. Along with Alabama and North Carolina, participating states include Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, Tennessee, and Virginia. Through SERCH, representatives from each state's Medicaid agency, state HIT offices, and RECs participate in weekly conference calls to discuss topics which the group determines to be of critical importance for advancing HIE and HIT;
- In June 2010, North Carolina participated in a multi-state collaborative (Alabama, California, Colorado, Georgia, Maine, Missouri, New York, North Carolina, South Carolina, and Tennessee) that developed and released an RFI from vendors regarding enterprise medication management services;
- North Carolina is a member of the statewide HIE Coalition;
- Through NCHICA, North Carolina has also participated in Health Information Security and Privacy Collaborative and NHIN activities;
- DMA participates in several e-communities of practice, including several related to administration of the EHR Incentive Program;
- DHHS shares its various IAPDs, scopes of work, and provider guidance related to administration of the EHR Incentive Program with other states upon request and via the DHHS and DMA HIT websites; and,
- DMA works with bordering states to resolve data issues related to administration of the EHR Incentive Program stemming from providers that practice in multiple states.

The State HIT Coordinator serves as the main point of collaboration between North Carolina and its neighboring states. Dr. Cline has shared contact information for HIT Teams between states.

A.14 Interoperability Status of the State Immunization Registry & Public Health Surveillance Reporting Database

The North Carolina Immunization Registry (NCIR) is currently available to entities across the state as a data entry system. The NCIR allows physicians to enter complete patient histories, by giving them easy access within their practices. These dynamic records housed in the NCIR will be critical in giving physicians the information necessary to make clinical decisions regarding treatment. While the NCIR is ideal for sharing historical patient records, it will need to be enhanced to exchange information with certified EHR systems. The NC HIE has the technical ability and know-how to support the interoperability goals of the NCIR system with certified EHR technology. The NCIR intends to leverage the NC HIE in an effort to connect many EHR systems as possible. The technical infrastructure has been funded by a grant from the Centers for Disease Control (CDC). Additional labor resources will be needed to implement the interfaces are supported by CMS.

The first planned public health reporting component for MU is through the NCIR. The future plan is to build the NCIR to interface with the N3CN IC via the NC HIE. The NCIR is jointly funded through the CDC, Maternal and Child Health state and federal funds, and most recently DMA, requested through the Implementation Advanced Planning Document (I-APD). Any additional funding requests and strategy for further system integration will be addressed in a future update to the SMHP.

The NCIR and the NC HIE are in the planning and procurement stages for the building of the following interfaces:

- NCIR to/from provider EHR systems – As of December 2012, the NCIR base system modifications are in the construction stage and are on track to be tested and implemented in the first quarter of 2013. After this, the NC HIE interoperability will begin. Through this interface, participants of the NC HIE will be able to submit immunization information queries through the HIE Clinical Portal or their CEHRT. Providers will also be able to retrieve requested immunization information and clinical decision support from NCIR through the HIE Clinical Portal or their CEHRT. In addition, providers will be able to electronically update the NCIR in real time through the HIE Network;
- NCIR to Medicaid's N3CN IC – This project will coincide with implementation of the NC HIE interface with the NCIR;
- NCIR to/from other entities, (i.e., local education agencies) – This project is currently in deferment until the success of connecting the NCIR with the NC HIE is demonstrated and confirmed; and,
- NCIR to the system that supports NC's Women, Infants and Children program – This project is currently in the planning stages. The implementation has been placed on hold until the NCIR to NC HIE interface has been further developed. After the NCIR and the NC HIE are connected, the development can be leveraged as a women/infant and children (WIC) interface.

Within DPH, several public health surveillance databases are utilized to meet disease management, containment and reporting requirements. These systems and their supporting systems are described below.

NC Electronic Disease Surveillance System: The NC Electronic Disease Surveillance System (NC EDSS) provides disease surveillance, disease outbreak/case management and an early detection system that allows public health analysts to receive, manage, process and analyze electronic data from public health entities and laboratories. Services include support for required case or suspect case reporting of reportable diseases, electronic lab reporting, and outbreak management. The current interface status of NC EDSS is:

- NC EDSS from StarLims (see below)- functioning ELR for by law reporting only

- NC EDSS to CDC - functioning
- NC EDSS from LabCorp - functioning ELR for by law reporting only
- NC EDSS from provider laboratories - DPH is partnering with the North Carolina Health Information Exchange to develop an ELR feed from providers and laboratories participating in the HIE.
- NC EDSS from hospital laboratories - As of October, 2012, DPH is receiving functioning ELR for mandatory reporting from 13 facilities that are part of a major multi-facility health system in the state.
- NC EDSS from National Commercial Laboratories – DPH is receiving functioning ELR for Blood Lead reporting from Mayo Medical Laboratories and is in the process of developing ELR for communicable disease reporting from Mayo as well. DPH is also in the testing phase with ARUP for implementing an ELR feed.
- NC EDSS from Local Health Departments' HIS - planned and funded on HIS side only for reportable diseases. HIS will not pursue this interface. (See HIS below.)
- NC EDSS from VR deaths and OCME- not planned or funded.

NC Disease Event Tracking and Epidemiologic Collection Tool - The NC Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) addresses the need for early event detection and timely public health surveillance in NC using a variety of secondary data sources like emergency departments, poison control centers, pre-hospital medical information and NC College of Veterinary Medicine.

StarLims: State Laboratory Information System for State Laboratory testing.

Health Information System (HIS): The HIS replaced the functionality of the Health Services Information System (HSIS) that was operational from 1983 to 2010. The HIS provides an automated means of capturing, monitoring, reporting, and billing services provided in local health departments, CDSAs, the North Carolina State Laboratory for Public Health and Environmental Lead Investigations by state staff in the Environmental Health Section. The HIS allows for the submission of claims to Medicaid and the reporting of all services delivered from local vendor software systems via a common layout and interface.

Vital Records: Examples of Vital Records are births, fetal deaths, and changes to records such as adoptions and legitimations. In January 2011, North Carolina implemented a statewide web-based, electronic birth records system. Plans are under development for web-based, electronic fetal death and death symptoms. The CDC's National Center for Health Statistics and National Associations of Public Health Statistics and Information Systems are developing standards in anticipation of potential, future meaningful use criteria that would include reporting of the medical portion of the birth certification through CEHRT. Because vital records serve both as a legal registration and public health function, separate interfaces or systems must be maintained for these distinct functions. The State Center for Health Statistics is a member of NAPHSIS and is providing feedback on standards as they are developed and the timing of integration of Vital Records with the NC HIE will be revisited after Stage 3 meaningful use criteria are finalized, based on readiness of Vital Records electronic systems and national standards development.

Central Cancer Registry (CCR) - The Central Cancer Registry (CCR) is the statewide, mandated cancer surveillance system. Statute requires that all health care providers that diagnose or treat cancer (i.e., hospitals, physician offices, radiation oncology centers and laboratories) report it to the CCR. About 80 percent of the cancer cases reported are from larger facilities which are approved by the American College of Surgeon's Commission on Cancer into a web-based, secure portal. The remaining 20 percent of the cases are reported from freestanding diagnostic, physicians and treatment facilities. CCR plans to work with the OHIT and NC HIE to develop an interface to implement electronic reporting to enable EPs to report to the CCR by 2014. Cancer reporting from EPs would greatly reduce the gap of underreported cases, increase timeliness and completeness of treatment information.

B. North Carolina's "To Be" HIT Landscape Vision

NC DHHS is committed to the MU of CEHRT in order to improve the quality, safety, efficiency and effectiveness of healthcare. In this section, the "To-Be" landscape for HIT is addressed. Specifically, the plan defines a five year vision along three commitments:

- Accelerating the adoption of CEHRT;
- Expanding the exchange of health information; and,
- Leveraging the Medicaid N3CN IC's technical capabilities to support the adoption of CEHRT, quality reporting, care improvement initiatives and care coordination.

B.1 Five Year Vision

North Carolina Medicaid's vision for HIT aligns with the broad vision for HIT and HIE defined by the NC HIE, the state-designated entity responsible for coordinating and executing a strategy for enabling statewide HIE in North Carolina. As outlined in the NC HIE Operational Plan, the NC HIE will provide:

> *A secure, sustainable technology infrastructure to support the real-time exchange of health information to improve medical decision-making and the coordination of care to improve health outcomes and control healthcare costs for all residents of North Carolina.*

In support of this vision, North Carolina expects to achieve the following measureable outcomes by January 2015:

> 1. One hundred percent of EPs and EHs will have access to HIE services required to achieve the MU of CEHRT;
> 2. NC HIE launched the secure exchange of patient information between and among participating entities through the HIE Network during April, 2012; and,
> 3. Eighty-five percent of EPs and more than 70 percent of EHs that serve Medicaid recipients will be meaningful users of CEHRT.

As of April 2014, North Carolina is still working toward outcomes one and three. While secure exchange is available through the NC HIE Network, several barriers—among the greatest, cost, readiness, and vendor cooperation—have prevented NC from ramping up connectivity and exchange in 2013 to the levels projected in the NC HIE's Operational Plan.

B.2 Advancing the Objectives of HIE

Statewide HIE Governance and Organizational Approach

2010-2012

To ensure information is exchanged in an accurate, secure, and timely manner, NC HIE is leading an effort to create a high-value HIE network and set of shared HIE services that builds upon, enhances and amplifies existing capabilities and investments in HIT. Key components of North Carolina's statewide HIE landscape include:

- ***State of North Carolina***: North Carolina state government, including DMA and DPH, plays critical roles in the leadership, oversight, coordination, and implementation of HIE. OHIT coordinates state agencies' HIT and HIE design, development and deployment efforts.
- ***NC HIE***: NC HIE's mission is provide a set of secure, scalable health information exchange services that promotes the access, exchange and analysis of healthcare information and enables participating

providers and organizations to: improve health care decision-making, management and coordination of care; improve health outcomes; and control healthcare costs. Representing a wide range of stakeholders in a public-private partnership, NC HIE continues to support an open and transparent, collaborative process to develop the legal, policy and technical infrastructure to accelerate the use of HIE services.

- ***Statewide Policy Guidance***: Statewide policy guidance will provide a common and consistent technical, privacy, security, and legal framework for participants in HIE and to ensure the secure, interoperable exchange of data. It typically includes: (1) detailed rules for privacy and security, technical interoperability, and financial obligations; (2) vendor contract requirements; (3) ongoing governance structure and participation; and (4) enforcement mechanisms.
- ***Qualified Organizations (optional)***: Qualified Organizations are entities designated by NC HIE to contract with health care providers and other entities on NC HIE's behalf to facilitate participation in the HIE Network. Qualified Organizations meet established criteria, have gone through an approval process, and have signed agreements to abide by the statewide policy guidance.
- ***End User***: A provider or other authorized user that accesses NC HIE services.

In addition to connecting directly to NC HIE, participation in the statewide HIE network and access to core and value-added services, can be accomplished through QOs. A QO is a healthcare organization or aggregator of organizations capable of:

- Aggregating providers for purposes of connectivity to the Statewide HIE network;
- Adherence to statewide policy guidance;
- Fulfillment of technical, legal, policy, and procedural obligations as defined by the Statewide HIE; and,
- Entrance into a binding contract with the statewide HIE.

QOs may be a variety of organizations or networks that have relationships with, or provide services to, providers. Potential Qualified Organizations may be, but are not limited to:

- Provider Networks
- Consortia of providers
- FQHCs
- Health systems
- Hospitals
- Integrated delivery networks
- Provider groups
- Local public health departments or public health organizations
- RHCs
- Regional Health Information Organizations
- Private, Non-Provider Networks
- Clearinghouses
- Laboratories
- Pharmacies
- Vendors
- Payers including North Carolina Medicaid and private insurers

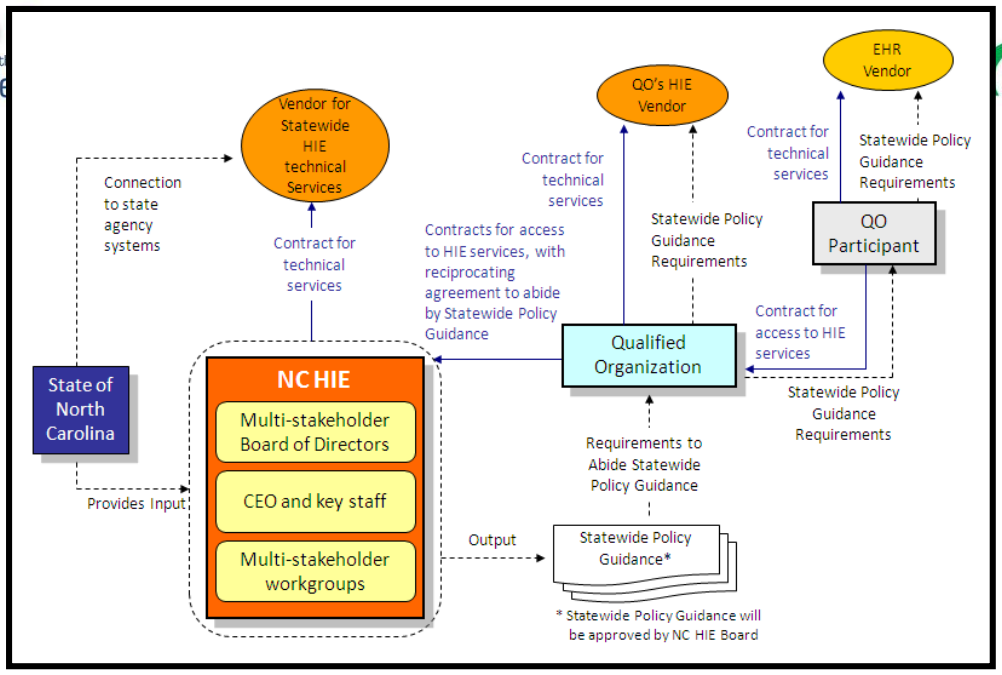


Figure 4 - Key entities and relationships in North Carolina's Statewide HIE Approach

NC HIE will create and oversee a structured accreditation process to ensure that potential QOs are capable of fulfilling the technical and policy requirements associated with participation in the statewide HIE network.

While participation in the statewide HIE will be voluntary, participants must sign a contract or participation agreement with the NC HIE, binding it to compliance with the statewide HIE's participation agreement and NC HIE privacy and security policies. There will also be a process and policies established to ensure ongoing oversight of participating entities to ensure compliance with NC HIE's privacy and security framework. If a participating provider is identified as noncompliant with the Statewide HIE's requirements as described in its contract, the entities' access to the HIE Network may be terminated.

Accountability and transparency will be central to ensuring the success of statewide HIE and encouraging provider participation. QOs will be expected to execute similar participation agreements and contracts with its members, binding those members to requirements for all statewide HIE members.

2013 and Beyond

N3CN is in the process of assuming governance of the NC HIE. More than a year ago, N3CN and the NC HIE announced an agreement to work together to improve North Carolina physicians' access to health care data and electronic medical records. As a "Qualified Organization" (QO), N3CN's existing infrastructure and provider relationships have been leveraged to realize the benefits of a health information exchange in a flexible, cost-effective and secure manner.

N3CN and NC HIE share a mission to impact care at critical moments through intelligent data use within our health care system, and have worked hand-in-hand to connect hospitals, ambulatory practices, free clinics, FQHCs and RHCs, getting actionable data into the hands of clinicians with the goal of improving patient care. This community-based collaboration between N3CN and NC HIE has continued to develop, bringing together top notch experience, world class technology and proven programs to create a tremendous value for North Carolina's health care community. Under new N3CN governance, NC HIE operations will focus on supporting North Carolina Medicaid and safety net providers and improving the health of the state's most vulnerable populations.

Under the N3CN umbrella, NC HIE will continue to operate as the State Designated Entity (SDE) for health information exchange as appointed by the Office of the National Coordinator for Health IT (ONC). NC HIE will:

- Refocus on core HIE value proposition of robust data exchange for the purposes of supporting communities that need or desire HIE services. These capabilities have already been delivered and will continue to be supported;
- Remove focus from value added services in its revised business plan;
- Revise adoption policies and approach to eliminate barriers:
    - Reduce the contractual and technical complexity of participating (all current contracts will be preserved); and
    - Reduce prices through diversified funding;
- Align with N3CN's long-standing community-driven model and mission;
- Review and simplify consumer opt-out policies; and
- Be focused on a voluntary exchange of data and populations managed by N3CN.

NC HIE will enhance the delivery mechanisms of N3CN programs through the exchange of near-real-time clinical data for population management, care coordination and transitional care for populations served. NC HIE and N3CN will continue to work with organizations and local communities that have a need for health information exchange within their communities and collaborate rather than compete with existing community or provider HIE efforts.

B.2.1 Statewide HIE Technical Approach

As described in the State HIE Strategic and Operational Plans and currently being implemented by NC HIE and its partners, North Carolina's statewide HIE technical infrastructure framework consists of three categories of services: core, value-added, and support.

Core Services

Core Services support connectivity and data transport between multiple entities and systems. The goal is to provide a lightweight and flexible infrastructure and serve as gateway to access Value-Added Services. Core Services create a foundation to exchange health information across organizational boundaries, such that two entities can:

- Identify and locate each other in a manner they both trust;
- Reconcile the identity of the individual patient to whom the information pertains;
- Exchange information in a secure manner that supports both authorization decisions and the appropriate logging of transactions; and,
- Measure and monitor the system for reliability, performance and service levels.

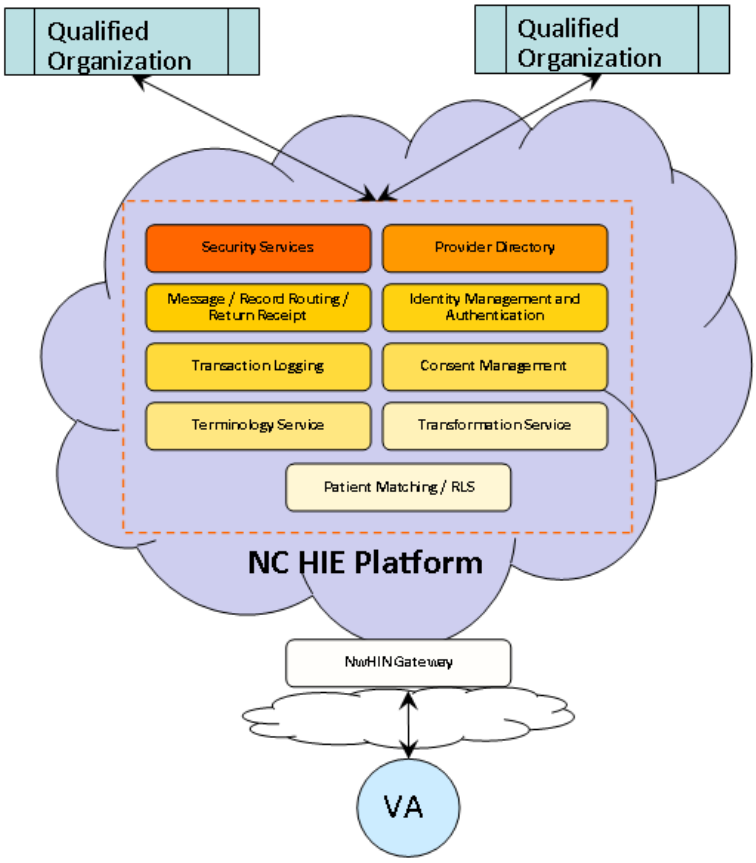


Figure 5 - Illustration of relationship between entities and the statewide HIE platform

NC HIE's core HIE services consist of the following components.

1. ***Security Services***: Multiple functional processes that ensure only authorized users access system or service resources. Processes must adhere to state and federal privacy and security standards. Access begins with a secure Web interface that conforms to security design standards. A consistent audit trail will be established across components.
    - Provider Directory: Includes services for locating providers by facility location and unique identifier; may include interdependent master facilities and master clinician indices.
    - Master Facilities Index: Index of facilities with which the clinician (or other user) has an affiliation/relationship. It processes additions, deletions, and updates to the facility index and processes requests for information from facilities index.
2. ***Master Clinician Index***: An index containing all relevant information on all registered clinicians within North Carolina. It will be an open and authoritative state level provider directory accessible to all QOs in the state.
3. ***Message / Record Routing / Return Receipt***: Enables participating providers to securely exchange key clinical information between their EHR systems (e.g., accept and route continuity of care documents (CCDs) between connected providers).
4. ***Identity Management and Authentication***: Authentication is frequently handled through digital certificates that prove to the HIE that the systems are trusted sources. Services will include an index of

participating entities (or QOs) and storage of participating entity rules (based on data sharing agreements) in order to enable sharing of clinical records.

5. ***Transaction Logging***: Maintains a transaction log that can facilitate audit activities. The transaction log will track the origination and destination of an information transaction and verify that the transaction was completed.
6. ***Consent Management***: Facilitates consent policies and patient preferences. NC HIE's technology partner will be expected to provide capability to facilitate consent policies for multiple consent models. NC HIE will also require the ability to provide system wide capability to restrict access to specially-protected data according to state and federal law.
7. ***Terminology Services***: Capability to provide translation between various medical vocabularies in clinical records, to provide LOINC encoding for lab results according to HHS standards, and in later phases, to provide mappings and encodings for all meaningful use standards.
8. ***Transformation Service***: Capability to provide transformation between different document formats (e.g., HL7v2 to v3 or EDI to XML), to parse and validate various document formats (e.g., XML and XSD), and to create and map across different message envelopes and content requirements.
9. ***Patient Matching/Record Locator Service***: The service provides three capabilities:

    - Reconciliation service that matches (i.e., cleans up) records from existing systems to provide a definitive mechanism to locate all records for a patient.
    - Enables requesting a list of patient information documents or clinical data locations using this index, either via a demographic attribute query or a direct index lookup.
    - Enables requesting one or more of the documents listed from a query be transferred to the requester's system.
10. ***Healtheway (formerly known as NwHIN Exchange)***: Provides for a single statewide implementation of the NwHIN Connect gateway available as a web service for authorized users and entities.

In addition to these infrastructural components, NC HIE's deployment of core services will include: (1) normalization of laboratory results; (2) transmission of CCD among participating entities; and (3) deployment of services in support of secure messaging using the Direct implementation specification.

Value-Added Services

Accessible via core services, value-added services serve as the tools and applications that allow end users the functionality to improve the safety, efficiency, quality, effectiveness of care. In developing its RFP for HIE services, NC HIE conducted a thorough and rigorous assessment of candidate value-added services across the dimensions of cost, feasibility, value to stakeholder groups, applicability to Meaningful Use, and appropriateness of delivery at the state level.

Based on the results of this assessment, NC HIE identified and prioritized value-added services that will be incrementally deployed:

- NC Immunization Registry
- State Lab Reporting
- Communicable Disease Reporting to the NC Department of Public Health
- Medication Management module through CCNC's Pharmacy Home module
- Lab orders and results

Additional value-added services such as interfaces with state registries and syndromic surveillance will be developed to address market demands and support meaningful use.

Supporting Services

Supporting services include the functions needed to maintain the technical operations and include:

- *Systems Environments*: Ability to maintain appropriate environments for development, testing, training, and production.
- *Hosting Services*: Technical infrastructure and services needed to run, maintain, and support service delivery.
- *Training*: Training of end users and administrators within NC HIE and each QO.
- *Help Desk*: Hardware and network support and maintenance.

The approach for NC HIE will remain relatively unchanged by the merger, with the exception of scaling down the development of value-added services to more directly meet the immediate needs of North Carolinas healthcare community. For instance, value-added services such as radiology results will be reassessed in the future.

B.2.2 N3CN/NC HIE Strategy for HIE

This section describes the high-level strategy for advancing the objectives of HIE in NC under the new governance structure of N3CN.

Since its inception, NC HIE has encountered many barriers to connecting the key players in the healthcare community, including integration costs, differing governance models, the upgrade or adoption of each organization's own EMR system, and the constraints on internal resources that these projects have created. Since the inception of NC HIE, large IDN's continue to increase in size and scope so that an increasing percentage of care delivery is now being delivered through these systems. These challenges have required NC HIE to consider alternative approaches and reassess strategies for accelerating statewide adoption of HIE. The map below illustrates the key health systems at play in North Carolina, including two existing regional health information organizations (RHIOs).

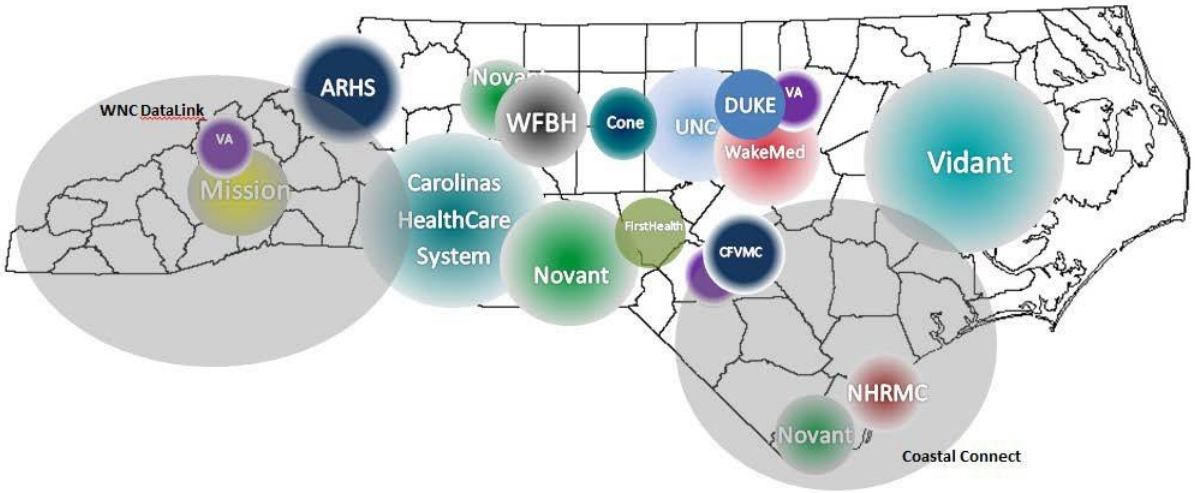


Figure 6 - Key Health Systems in NC

The NC HIE implementation strategy unfolds in three phases and will build on the foundation N3CN has established through the IC.

The NC HIE implementation strategy unfolds in three phases by building on the foundation N3CN has established through its Informatics Center, creating numerous efficiencies for Medicaid, NC HIE and N3CN. For example:

- The N3CN and NC HIE partnership and implementation strategy means that connecting North Carolina's immunization registry, vital records, and other state public health systems will only require single interfaces with the new infrastructure, where two per system had been previously planned.
- By leveraging existing N3CN Informatics Center infrastructure, NC HIE can avoid the development of new pipes for exchanging information with some of the state's largest hospital systems and their physician practices (as depicted below in **Figure 7**). NC HIE estimates that this represents a savings of approximately 50% for connections between these systems and the NC HIE because provider-side connectivity is already built.

Phase 1 – State Insured Population

Under N3CN governance, NC HIE has a new opportunity to leverage existing data feeds already implemented through the Informatics Center via the Beacon initiative for the purposes of care management. In this phase, NC HIE will seek to receive data feeds from health care systems on the state insured populations (Medicaid, Health Choice, and in 2014, the State Health Plan). These data feeds to N3CN represent approximately two million lives across the state and include information such as ADTs and CCDs and will be available through NC HIE as the appropriate technical connections and legal agreements are established. In instances where the participant is willing, NC HIE will accept feeds beyond the state insured population.

Having ADT and CCD information available through a health information exchange represents many benefits to the participant, including:

- Increased efficiency and decision-making by providing more complete patient information at the point of care;
- Prevention of unnecessary readmissions by providing discharge plans to enable effective follow-up;
- Ease physician workflow requirements with single sign on access to NCIR and labs with other content in development in 2013;
- Reduction of adverse drug events resulting from drug interactions and allergies by providing improved access to medication and allergy history;
- Support for Meaningful Use requirements; and,
- Sophisticated decision support that creates efficiencies with existing limited resources.

The graphic below represents an example of connections that NC HIE is targeting to begin receiving data feeds from across the state, forming the Medicaid HIE, or "Safety Net HIE." Approximately 78 hospitals and 1,100 practices are represented here*.

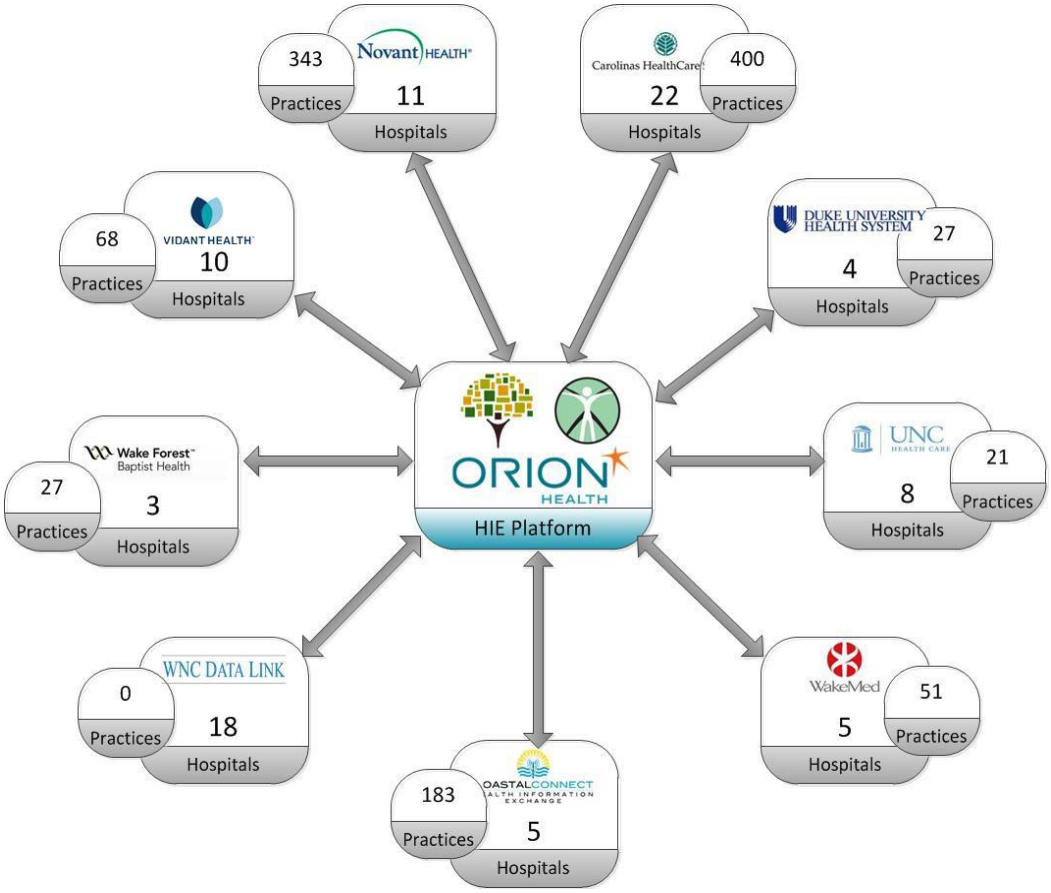


Figure 7 - Medicaid/Safety Net HIE

*NC HIE calculated the number of hospitals and practices in each system based on information from each organization's website.

In addition to providing access to patient information contained in ADTs and CCDs, NC HIE will offer participants compelling and actionable content through other data sources, beginning with a connection to North Carolina's Immunization Registry (NCIR). This interface will enable physician practices and hospitals with electronic health records systems to submit data to the NC Immunization Registry directly from the EHR system, resulting in reduced data entry, improved accuracy, and faster data delivery.

With this strategy shift and the move to concentrate on NC's state insured population as opposed to the population at large, NC HIE estimates financial fluctuation and adjustments in the calculation of Medicaid's "fair share" of HIE costs. These adjustments will be made to the HIE I-APD and resubmitted to CMS no later than summer of 2013.

This strategy and support from Medicaid will ensure that our state's most vulnerable populations are a top priority, which is further supported through the permanent PMPM increase that was recently granted to CCNC to sustain the ongoing costs associated with the care management of said population. This is aside from HITECH funds approved for the deployment of NC HIE core services.

In Phase 2, these data sources will evolve to include additional data and state registries.

Phase 2 – Community Building Tactics

The second phase of NC HIE's implementation strategy involves expanding HIE connectivity in the Phase 1 communities to their supporting and referring providers. The value of HIE increases exponentially when health care providers and organizations in the surrounding community adopt health IT technology and share information via health information exchange.

Community hospitals, long term care, skilled nursing facilities, home health, ambulatory practices, behavioral health and other safety net providers (such as federally qualified health centers, health departments and rural health organizations) will be the focus of this phase. These data feeds will not be limited to Medicaid and state insured populations.

This community building phase will:

- Help provide a patient-centered medical practice environment
- Provide improved care coordination among different providers
- Provide quicker access to patient clinical results resulting in decreased duplicate medical testing
- Result in more efficient patient care by providing a wider range of access to patient histories
- Enable more comprehensive care management for the chronic population

In this phase, NC HIE will deliver additional value to participants by adding data sources such as medication management information through CCNC's Pharmacy Home module, lab reporting with the State of NC lab, and communicable disease reporting to the NC Department of Public Health.

NC DIRECT (direct secure messaging solution) will also be leveraged to allow health care providers to exchange protected health information quickly and securely. The solution is a core service of the NC HIE network and can also be utilized to communicate with licensed providers outside of the NC HIE network that have a NC DIRECT mailbox. Currently the cost of NC DIRECT for non-members of NC HIE is $100 per mailbox per year. With NC DIRECT, a provider can:

- Exchange simple, secure messages with other clinicians, including PHI
- Enhance communication by sharing patient care summaries based on latest patient information
- Enable secure electronic exchange between facilities that may not have a EMR system in place
- Eliminate privacy and security concerns related to faxing patient information

Phase 2 Diagram

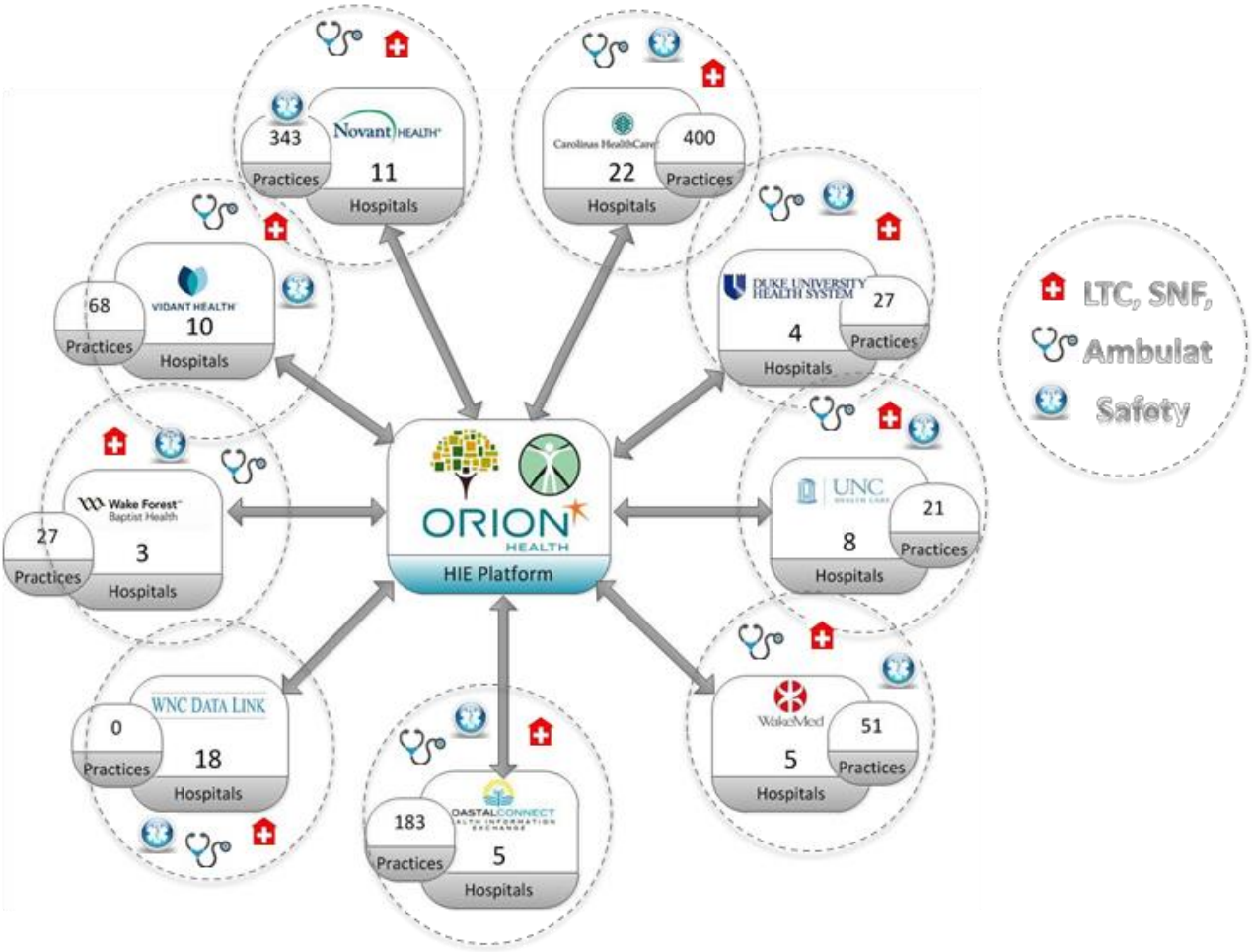


Figure 8 - Community Building Tactics

Phase 3 – Population Expansion

The third phase of the approach involves expanding beyond the state insured feeds to receive full population feeds from hospital systems and connecting the remaining disparate providers and systems throughout the state. By this time, NC HIE will have reached a "critical mass" of participants and the value proposition of HIE is realized. NC HIE is EHR agnostic and will interface with any EHR and other HIE's and is therefore non-competitive to existing solutions.

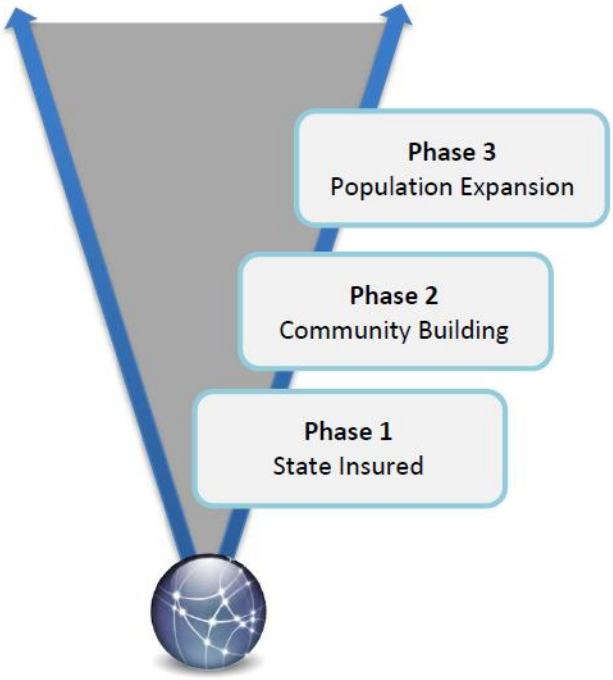


Figure 9 - N3CN/HIE Phase 1-3

B.2.3 Risks and Mitigation Strategies

DMA will manage risk through direct engagement with NC HIE and rigorous oversight, and monitoring. DMA's contract with NC HIE for creation of core services will include a detailed statement of work with funding tied to quarterly implementation milestones. NC HIE will be required to provide quarterly updates on technical developments and the number of QOs and participants who have access to core HIE services and the volume of utilization.

Description of Risk	Probability	Impact	Prevention/Mitigation Strategy
NC HIE fails to deploy components of core technical services	Moderate	High	DMA will structure its contract with NC HIE for core technology licenses in multiple parts to ensure system operates as functions prior to the release of additional payments. Consistent with industry best practice and agile development processes, NC HIE's will release functionality in discrete increments that will: (1) improve the ability for NC HIE to manage project risk and (2) provide stakeholders the opportunity to revalidate their needs and requirements.

Description of Risk	Probability	Impact	Prevention/Mitigation Strategy
NC HIE's on boarding of Qualified Organizations is slower than anticipated	Moderate	Moderate	DMA's contract with NC HIE will tie payments are to achievement of on boarding milestones. Learning from the implementation experiences of other statewide HIE efforts, NC HIE has dedicated resource to assess stakeholder needs, communicate the value of participation in statewide HIE, and support the on boarding needs through the availability of training and support services. To help accelerate the on boarding of eligible professionals and hospitals, DMA will leverage its Medicaid EHR Incentive Program communications to market the benefits of connecting to the statewide HIE network.
Focus of core services shifts away from meeting MU criteria	Low	Moderate	The state's direct involvement in the leadership and decision making of NC HIE ensures that the HIE continues to focus and prioritize the needs of entities meeting the existing and future HIE requirements for meeting MU.
Subsequent stages of MU create new requirements that aren't addressed by NC HIE's core services	High	Low	NC HIE's modular design and strategy to provide value-added services incrementally based on market demand will provide a pathway to address future requirements. DMA will work through NC HIE's technical workgroup to ensure the latest MU requirements are considered in prioritization for system expansion.

Table 15 - Risk Analysis

As part of its obligations to oversee funding from ONC's State HIE Cooperative Agreement, NC HIE has developed a risk mitigation strategy built on four principles: sharing risks, reducing the size of activities, simplifying our solutions and operations, and leveraging relationships. NC HIE manages risks by domains: Resource, Delivery, and Market.

NC HIE's risk mitigation strategies for the three domains of implementation are illustrated in **Figure 10**.

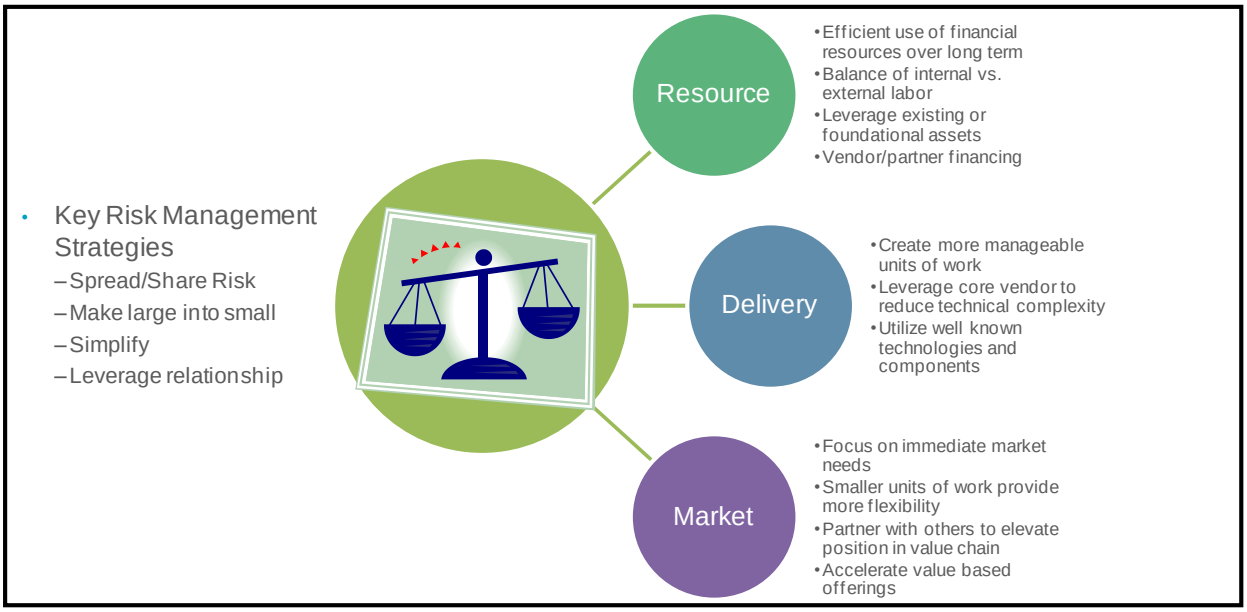


Figure 10 - HIE Risk Management Strategies

NC HIE's merger with CCNC does not impact the risk mitigation strategy described above. Given that the core services have now been deployed, the highest risk identified is a non-issue at this point.

B.2.4 Annual Benchmarks and Performance Goals

The table below explains the NC HIE's projected 2012 goals and metrics for success through year 2016.

Performance Goal	Metric	2012 Goal	2012	2013 Goal	2014 Goal	2015 Goal	2016 Goal
Deploy core infrastructure components	Successfully test and acceptance of components	Complete test and acceptance	Yes	n/a	n/a	n/a	n/a

Performance Goal	Metric	2012 Goal	2012	2013 Goal	2014 Goal	2015 Goal	2016 Goal
Expand connectivity to core services	Total # of QOs connected to core services	8	1	5	9	11	12
	Total # of hospitals connected to core services	40	1	5	56	90	110
	Total # of physicians connected to core services	6,046	435	1,500	7,000	14,403	17,462

Table 16 - Annual Benchmarks and Performance Goals for the Statewide HIE Core Services

2013

The 2013 – 2016 goals have been adjusted to reflect experiences and information gained in 2012. These new goals also reflect the impact of N3CN governance. For instance, under N3CN governance, QOs will no longer be a requirement for connection to NC HIE. For this reason, we believe there will be fewer but larger qualified organizations. Additionally, the market continues to see consolidation in the market with the growth and expansion of large IDNs. The goal for hospitals in 2013 includes fully integrated hospitals. We will aggressively conduct our outreach program to increase the numbers of fully integrated hospitals going forward. Additionally, securing integration funding for Medicaid Priority Hospitals in 2013 would drive the number of connections for 2014.

B.2.5 Link to Meaningful Use Strategy

In October 2010, NC HIE's Clinical and Technical Operations Workgroup evaluated the ability for NC HIE and the private market to support providers' ability to meet current and anticipated requirements of meaningful use. (refer to the table below)[3]

MU Stage 1 Objectives		MU Set	Role of NC HIE's Core Services	NC HIE met goal
Eligible Professionals	**Eligible Hospitals**	**Core/Menu**		
Generate and transmit **permissible prescriptions**	*Not applicable*	Core	Not applicable; functionality	n/a

[3] Please note that NC HIE will continue to identify and incrementally deploy additional value-added services and work with stakeholders to facilitate activities that increase providers' ability to meet existing and future Meaningful Use requirements.

MU Stage 1 Objectives		MU Set	Role of NC HIE's Core Services	NC HIE met goal
Eligible Professionals	**Eligible Hospitals**	**Core/Menu**		
electronically (eRx)			addressed via EHR HIE services not sponsored or hosted by NC HIE	
Incorporate **clinical lab-test** results into EHR as structured data	Incorporate **clinical lab-test** results into EHR as structured data	Menu	NC HIE's deployment of core services will include laboratory normalization functions that will facilitate the interoperable exchange of clinical lab-test results	Yes. Normalization delivered through core services. Contracts with state lab and two commercial labs in place (Solstas and Labcorp).
Report ambulatory quality measures to CMS or the States	**Report hospital quality measures** to CMS or the States	Core	To be addressed by service provisioned by N3CN	No. Contract finalized, development scheduled for 2013.
Capability to exchange **key clinical information** (for example, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Capability to exchange key clinical information (for example, discharge summary, procedures, problem list, medication list, allergies, diagnostic test results), among providers of care and patient authorized entities electronically	Core	Core Services will enable authorized users on the statewide HIE network to search for, transmit, and receive summary care records	Yes. Delivered through the deployment of core services.

MU Stage 1 Objectives		MU Set	Role of NC HIE's Core Services	NC HIE met goal
Eligible Professionals	**Eligible Hospitals**	**Core/Menu**		
The EP, EH or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should **provide summary of care record for each transition of care or referral**	The EP, EH or CAH who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should **provide summary of care record for each transition of care or referral**	Menu	Core Services will enable authorized users on the statewide HIE network to search for, transmit, and receive summary care records	Yes. Delivered through the deployment of core services.
Capability to **submit electronic data to immunization registries or Immunization Information Systems** and actual submission in accordance with applicable law and practice	Capability to **submit electronic data to immunization registries or Immunization Information Systems** and actual submission in accordance with applicable law and practice	Menu	To be addressed by service provisioned by N3CN	No. Contract executed with DHHS to develop interface in 2013.
Not applicable	Capability to submit electronic data on **reportable (as required by state or local law) lab results** to public health agencies and actual submission in accordance with applicable law and practice	Menu	To be addressed by NC HIE Participant Service in subsequent deployment of value-added services	

MU Stage 1 Objectives		MU Set	Role of NC HIE's Core Services	NC HIE met goal
Eligible Professionals	**Eligible Hospitals**	**Core/Menu**		
Capability to **submit electronic syndromic surveillance data** to public health agencies and actual submission in accordance with applicable law and practice	Capability to **submit electronic syndromic surveillance data** to public health agencies and actual submission in accordance with applicable law and practice	Menu	To be addressed by NC HIE Participant Service in subsequent deployment of value-added services	No. Public health leadership decided to delay electronic submission to NC EDSS by eligible professionals until after the NCIR, SLPH, and Vital Records systems were fully integrated with the NC HIE in 2013.

Table 17 - Core HIE Services and Stage 1 Meaningful Use Criteria

B.2.6 Clinical Quality Measures and Public Health Interfaces

As stated above, DMA plans to expand the IC's collection and analysis of quality data to include the new data as a result of MU requirements. The approach will be to create a data aggregator to accept data from providers using the CMS Physician Quality Reporting Initiative (PQRI) 2008 Registry XML standard.

In addition, I-APD funding will be used to provide an immunization interface from the NCIR to the IC to further support population management of Medicaid beneficiaries in 14 networks and 1,400 providers' offices throughout North Carolina. Funds will also provide support for interoperability of the NCIR and EHRs with a focus on the exchange of vaccination records and reducing the duplicate data entry burden on Medicaid providers. The addition of these and other public health data to a statewide service is described in *Section A.14: Interoperability Status of the State Immunization Registry & Public Health Surveillance Reporting Database*.

B.2.7 Short- and Long-Term Value Proposition

The creation and provision of statewide HIE core services will yield benefits for participants across operational, service delivery, and programmatic dimensions as outlined below.

Category	Participant Benefit
Operations	• Reduced cost of operations and solutions • Leverage of common services (e.g., Value-Added Gateway) • Leverage investment in Core Services to reduce cost of connecting physicians • Access to shared applications services • Single connection and data governance model • Reduces cost of managing multiple interfaces and negotiating independent data agreements • Provides legal benefits to participants

Category	Participant Benefit
	• Indemnification for physicians and the participants
Service Delivery	• Improve care coordination and quality across a broader community • Access to NC HIE services will provide new tools and applications • CCHIE can leverage connectivity to DHHS and other healthcare participants
Program	• Ability to participate in collaborative community

Table 18 - Participant Benefits

B.3 Meeting the Goals for Adoption of Certified EHR Technologies

In order to achieve an 85 percent adoption rate among EPs and over 70 percent adoption among EHs by January 2015, NC DHHS is taking the following steps to accelerate adoption:

1. Early Implementation of the EHR Incentive Program

In early 2011, NC actively invested in developing the systems necessary to administer the EHR Incentive Program, including working with CMS and its partners on the connection of NC's Medicaid Incentive Payment System (NC-MIPS) with the Centers for Medicare & Medicaid Services' Registration & Attestation System (CMS R&A). The first EPs who successfully attested to AIU of CEHRT received payment in March 2011.

2. Partnering with the REC

In addition to administering the physician practice quality improvement program, NC AHEC serves as a federally-designated REC that provides individualized, onsite EHR consulting services to practices. NC Medicaid partners with the REC through management meetings, the DMA HIT Stakeholders Group, and participation in REC staff and office hours calls to help REC EHR consultants target outreach and support efforts to clinicians who serve Medicaid recipients.

3. Multi-channel communication

An investment has been made in a number of different communication channels in an effort to connect with, inform, and encourage providers in their adoption of EHRs. As of December 2012, these include:

- Dedicated NC Medicaid EHR Incentive Program webpage within the DHHS website, including an extensive FAQ section, at http://www.ncdhhs.gov/dma/provider/ehr.htm;
- Monthly contributions to the Medicaid Provider Bulletin and an EHR Incentive Program Special Bulletin, at http://www.ncdhhs.gov/dma/bulletin/index.htm;
- Articles and surveys published in partner newsletters and communications, including NCHICA, NCHA, and NCMS;
- Memos e-mailed directly to the Medicaid provider community on various topics;
- Presentations to REC staff, NC medical school representatives (Duke, ECU, UNC, Wake Forest), NCHA, CCNC Clinical Directors, NC Medical Group Managers, NCHICA CIO Roundtables, and other stakeholder groups;
- Presentations at DMA Provider Trainings Statewide (in collaboration with HP; DMA traveled to Greensboro, Charlotte, Greenville, Asheville, Fayetteville and Raleigh, and effectively reached more than 800 providers;

- Two e-mail and phone support channels:

  For program or process questions:

  - (919) 814-0180
  - NCMedicaid.HIT@dhhs.nc.gov

  For technical issues or attestation status (until June 28, 2013 – then, use above):

  - (866) 844-1113
  - ncmips@csc.com;
- Quarterly meetings of the DMA HIT Stakeholder Group (for a list of member organizations, refer to *Section C.2.2.1: Provider Outreach via Partners*); and,
- NC Legislative Quarterly HIT Report, which includes Medicaid, ARRA-funded, and private HIT initiatives.

For a more complete look at the NC Medicaid EHR Incentive Program's outreach and communication activities, refer to *Section C.2: Outreach and Provider Support* of this plan.

B.4 Supporting Quality Reporting and Care Improvement Goals

While access to HIE services and widespread adoption of CEHRT are critical enablers of care improvement, providers also need the ability to collect, report and receive feedback on quality indicators in order to advance care and population health along evidence-based guidelines. Therefore, North Carolina will ensure providers have routine and timely feedback on the CMS-approved quality measures they collect and submit.

In addition, NC DHHS will expand upon its hands-on quality improvement model, the North Carolina Improving Performance in Practice (IPIP) project via the NC AHEC Program, developed in partnership with the NC Governor's Office, the NC DPH, CCNC, NCMS, the NC Academy of Family Physicians, CCME, the NC Healthcare Quality Alliance, and the major insurers in the state and other state agencies. NC IPIP is currently funded through NC AHEC funds as well as funding from philanthropic and other grant and payer organizations, and delivered through a statewide network of QICs employed by the NC AHEC Program at each of its nine regional centers. Through AHEC's partnerships, all primary care providers in NC who accept Medicaid have access to the resources of the QICs. The QICs are currently working in over 200 primary care practices across the state, providing assistance to:

- Integrate the use of the EHR into practice workflow to improve care management;
- Develop office systems within the EHR to track patients with specific chronic diseases;
- Train practice staff to use data from EHR systems to produce dynamic, electronic reports reflecting clinical performance as measured by nationally-endorsed indicators;
- Assist practices in reporting quality measures;
- Educate practices on the importance of participating in HIE;
- Build the consistent use of quality measurement and HIE into common office policies and protocols to support improvement in care with increased access to data;
- Assist practices to use resources within the EHR to help educate their patient population on the importance of preventing and/or managing chronic disease;
- Stay current on all MU criteria as it evolves over time; and,
- Provide electronic reporting to the designated public entity.

The NC AHEC Program has expanded this proven model to embody the work of the REC by putting in place the personnel, educational resources, and direct technical assistance support to successfully implement and utilize technology to improve the quality of healthcare as funding allows.

B.5 Proposed Vendor Initiatives

B.5.1 North Carolina Area Health Education Centers

Moving into Stages 2 and 3 of MU, NC would like to promote the electronic exchange of health information to improve the quality and lower the cost of health care in North Carolina. It is with this goal in mind that NC proposes to leverage NC AHEC's existing infrastructure and strong history of adult learning to continue the work done in Stage 1 to promote the electronic exchange of health information to improve the quality and lower the cost of health care in North Carolina.

The objectives tied to the enhanced funding for NC DMA/NC AHEC initiatives are as follows:

- Help NC physicians prepare for Stage 2 MU;
- Promote patient engagement through use of electronic patient portals;
- Create an expanded version of a clinical decision support tool by using demographic information collected within CEHRT to target a specific, real world problem and disparity, develop targeted practice tools, and demonstrate effectiveness at reducing the health disparity;
- Remove vendor-specific barriers to the achievement of MU Stage 2;
- Strengthen an existing statewide project management database to improve NC's ability to deliver information rapidly and appropriately and utilize the data to drive quality improvement practices; and,
- Bring DMA into quarterly NC AHEC collaborative meetings at the three largest AHECs to address Medicaid and safety net providers to inform them about HIT program initiatives.

While NC AHEC has made tremendous strides, further assistance is needed to support these practices in meeting Stage 2 Meaningful Use and tackling some of the more difficult challenges like connectivity, information sharing, and patient engagement. NC AHEC proposes to maintain 1.5 staff in each of the nine regional AHECs to meet the needs of these Medicaid providers to ensure the success of NC's HIT initiatives and to further promote and ensure a higher quality of care for the vulnerable patient populations they serve.

NC AHEC will further leverage its statewide reach and highly trained field staff to extend services to specialty practices. In order for medical homes to function as "medical neighborhoods", that is to achieve optimal integration of evidence based care, specialties outside of primary care need to understand medical home functionality and their relationship to the medical home entity. These specialty practices need to achieve the advanced stages of meaningful use to be fully electronically and functionally connected to the primary care practice in order to coordinate and deliver cost effective and high quality, chronic care. While most specialists participating in the program are pediatric subspecialists associated with academic health centers, there are community based specialty practices, particularly in small and mid-size communities, that will need to achieve advanced MU independent of large health systems and who would benefit from AHEC services. We will allocate .25 FTE of a practice consultant in each region to: 1) discuss subspecialty – primary care integration and identify services that the AHEC-DMA partnership could provide to aid their systems process, 2) identify eligible, independent subspecialty practices in each region, 3) create and disseminate advanced MU plans for each practice to achieve advanced MU in these practices, and identify opportunities for the subspecialty practices to coordinate with their primary care colleagues.

MU Stage 2 includes a new emphasis on patient engagement through electronic patient portals. This requirement presents a unique opportunity for all patients to be actively engaged in their healthcare. For the NC Medicaid EHR Incentive Program in particular, regular use of patient portals by parents should result in large gains in primary care engagement and adherence to preventive care recommendations. NC proposes creating a series of six 30-minute modules with slides and voice over that can be viewed either online or in the waiting rooms of participating pediatric practices. As a complement to the modules, NC AHEC will host two 1-hour live workshops that can be accessed face to face in an AHEC classroom venue or on the Internet. Topics in this consumer education series will include privacy and security, accessing labs and tests, following your child's development, e-engaging your provider, utilizing the preventive recommendation calendar and prompts, and accessing patient education materials. NC will pilot the program in five volunteer pediatric practices in one AHEC region during year one. The portal usage will be measured in the participating practices over time. If the year 1 program is successful, NC will disseminate the program to interested practices in year two, and then develop a robust plan for all practices that care for children in year three.

Additionally, NC AHEC will need 1.75 FTEs in the central office to help manage and coordinate the efforts in the nine regional AHECs. These positions will coordinate, train, and inform statewide staff as MU Stage 2 is rolled out and the nuances of meeting these requirements evolve. These personnel will use NC AHEC databases and mechanisms and information from NC Medicaid HIT to promote the sharing of information across the state as well as to support staff training, further professional development, and conduct quarterly milestone calls to ensure appropriate progress, identify barriers in the practices, and promote solutions to these barriers. These positions will also provide the clinical leadership necessary to develop the programs described below, analyze program effect to recommend adjustments and enhancements over time, and work with collaborative and stakeholders, including the relevant provider societies and integrated delivery systems, to disseminate successful programs.

DMA and NC AHEC also see an opportunity to apply demographic data (required to be captured in EHRs for MU) to CQMs and use these reports as a mechanism to identify disparities in cardiovascular-related measures. These reports will then be used to design robust practice-based clinical decision support tools through rapid-cycle QI to narrow specific demographic associated gaps. We propose an 18-month pilot utilizing a disparity-focused quality improvement coach who will initially work with volunteer practices in the North Carolina Stroke Belt (specifically the Eastern AHEC, Wake AHEC, and Area-L AHEC Regions). The QIC and practice teams will use Plan, Do, Study, Act (PDSA) cycles to drive high-impact quality measures for all practice patients but will also build practice systems that particularly address demography-related care gaps. As practice tools are developed and effectiveness is demonstrated, regional and statewide dissemination will occur. This would require funding of one QIC equivalent with extensive travel and possibly trainings for QICs at the end to spread successful interventions.

A new position will be created to support EHR vendor relations in the state of NC. This vendor liaison position will work with the NC AHEC practice support staff and the EHR vendor staff to ensure that any issues or questions are addressed in a timely manner and vendor specific barriers to achievement of MU Stage 2 will be minimized or removed. The vendor relations liaison will also host meetings and webinars with the largest EHR vendors in the state to create robust two-way communication where vendors can educate providers about best practices that overcome common barriers in the meaningful use and practical workflows of their specific systems and providers can help identify barriers and give feedback on proposed solutions. This collaborative relationship is likely to accelerate achievement of the later meaningful use stages and help develop EHR tools and workflows that have greater impact on clinical outcomes.

NC AHEC plans to hire a computer programmer to improve the project management database. These improvements will allow NC AHEC to track NC Medicaid beneficiaries' progress at the practice, individual

consultant, regional and state levels to readily identify successes and barriers so that resources are distributed rapidly and appropriately. NC AHEC will also hire a data analyst to better analyze the data and feedback to practices and partners to affirm progression of Medicaid providers toward MU Stage 2 and ensure that NC AHEC's interventions continue to improve the quality of healthcare in NC. In this system, NC AHEC seeks to couple practice level data with administrative data to gain as complete a picture of project evaluation and effect as possible.

As the state's largest provider of continuing education for healthcare professionals, NC AHEC has found that there is much to be gained from hosting collaborative network meetings for local providers to come together and share their experiences and learn from each other regarding their implementation and use of electronic health records. DMA would like to leverage this existing collaborative structure to use as an opportunity to connect with program participants and learn more about their barriers to meaningful use and to provide program information, as needed. NC AHEC will supplement the on-site support of practices with quarterly collaborative meetings for Medicaid safety net providers in each region throughout the year, where DMA will participate in the three largest region's quarterly meetings. These meetings build around practice sharing to enhance achievement of MU Stage 2 and use these measures to address important QI targets. Local and national expertise on these issues and other important care models will be shared.

B.5.2 North Carolina Office of Rural Health and Community Care (NC ORHCC)

In support of our rural health clinics and critical access and rural hospitals, we are providing technical assistance for a number of initiatives. The Meaningful Use (MU) initiative is of critical importance to our office and to the clinics and hospitals for which we provide assistance. For example, rural hospitals, as well as many statewide medical facilities that treat low income and uninsured residents, may receive help through grant funds. Qualifying patients may take advantage of drug companies' free and low-cost drug programs through ORHCC's medication assistance program.

Not only will this initiative incentivize them to upgrade their systems but it will also begin to shift the production-based paradigm to a quality-based paradigm. ORHCC works closely with NC Medicaid and the NC REC to provide this assistance. However, NC ORHCC has not met the demand in the smaller clinics and in the critical access hospitals. ORHCC estimates approximately 20 of the funded rural health clinics will benefit from this technical assistance and approximately 23 critical access hospitals, and an additional 15 small rural hospitals will benefit as well.

Per ONC's "call to action" regarding the MU challenge in critical access and small rural hospitals, ORHCC plans to work in hand with the REC, to add value and leadership in realizing the ONC's MU goal for these hospitals by 2014. In addition to the RHC and critical access and rural hospitals, we will assist any requesting safety net provider. For example, as the Affordable Care Act is implemented, a number of the 79 free clinics in NC will become "charitable." Therefore, they will hire providers where needed and accept and bill for Medicaid, making them eligible for MU and in need of technical assistance.

ORHCC knows the final ruling for clinical Stage 1 and 2 MU and anticipates more aggressive quality measures in Stages 3. For the clinics and hospitals already attesting to AIU, it is imperative they prepare and begin the clinical Stage 1 process, knowing once they have begun they must continue in order comply with the initiative.

ORHCC is proposing the use of federal funds to create a temporary position of a Meaningful Use Coordinator to drive the initiative. ORHCC understands this position will be a professional position with a high level of communication skills and the ability to establish rapport not only with the clinics and hospitals but with other participants such as NCHA, NC Free Clinic Association, NCCHCA, DMA, DHHS' OHIT, NC REC, and others.

B.5.3 Medicaid Evidence-based Decision Project (MED Project) and the Drug Effectiveness Review Project (DERP)

The DMA HIT team has established a Clinical Quality and Data Workgroup, which is considering how data captured during MU can be effectively used to determine areas of potential improvement relative to Medicaid clinical coverage. The use of these MU data to study and develop evidence-based coverage offers great opportunity, and dovetails with the federal meaningful use of Meaningful Use, or MU^2, initiative. Evidence-based standards and measures provide a mechanism for Medicaid to select the best treatments for improving health outcomes. This ability to exercise sound decision-making provides policymakers an unbiased analysis of complex issues.

To supplement the evidence-based data available through MU measure reporting, DMA would like to participate in two initiatives coordinated by the Oregon Health Sciences University's Center for Evidence-based Policy. These two projects are the Medicaid Evidence-based Decision Project (MED Project) and the Drug Effectiveness Review Project (DERP).

The **MED Project** is a collaboration of 11 state agencies, primarily Medicaid, with a mission to provide policy-makers the tools and resources to make evidence-based decisions. As a member of MED, North Carolina will receive the following benefits:

- **Evidence and Policy Reports** - North Carolina will have access to proprietary reports on a variety of policy and evidence issues. The MED project produces evidence-based answers to well-defined questions. These reports utilize robust research strategies to appropriately cover clinical, policy and financial issues.
  Recent report topics include: Cost Effectiveness of Bariatric Surgery for Adults; Cost Effectiveness of Palivizumab (Synagis®); Cost Impacts of Primary Care Diabetes Case Management; Essential Health Benefits - Substance Use Disorders Coverage; Strategies to Reduce Emergency Room Utilization for Non-Emergent Visits; and Summary of AHRQ ADHD Comparative Effectiveness Review. In addition to these recent reports, North Carolina will have immediate access to a full archive of all reports produced by MED since its creation.
- **Rapid Response to State-Specific Needs** - North Carolina will also have access to MED's Participant Request service, which allows members to contact the MED project staff at any time and request a brief review of the evidence on an emerging state issue. The MED team will quickly search for evidence and produce a report on the topic. Participant requests can take a variety of forms, including an expert librarian search, a brief evidence summary, a policy brief, or a review of information provided by a vendor.
  Recent participant requests include: Definitions and Policies for Cosmetic and Reconstructive Surgeries; Epidural Steroid Injections of the Cervical and Lumbar Spine; Health and Behavior Assessment and Intervention Codes Policy Analysis; Prenatal Genetic Testing; Robotic-assisted Hysterectomy in Obese Women; Spinal Injections for Chronic Low Back Pain - Policy Summary and Substance Abuse Testing in Outpatient Treatment Programs.
- **Collaboration and Dissemination of Best Practices -** The MED Project is strengthened by the collective knowledge and expertise of its members. In addition to twice-monthly conference calls, participants meet twice a year at in-person meetings. These unique forums allow the MED project participants and other key staff to share ideas and collaboratively address common issues.
  In addition to its regular meetings, MED convenes Working Groups to address areas of special interest to states. These groups address current challenges on priority issues through review of evidence and

policies as well as sharing current state practices. Currently MED has three working groups: 1) Oral Health, 2) Behavioral Health and 3) Durable Medical Equipment.

- **Information Resources -** North Carolina will have access to a number of proprietary information sources including:
    - Web-based Information Clearinghouse - The Information Clearinghouse compiles MED reports, federal, state and private payer policies and news and discussion forums, in a single location. It is available to participants and their agency staff through a secure website.
    - Access to Hayes Databases **-** Participants also have direct access through the MED Clearinghouse website to Hayes, a nationally recognized vendor specializing in off-the-shelf evidence products.
    - Weekly Updates – Weekly electronic newsletters that provide relevant, timely information and evidence to participants. MED staff scans a wide breadth of journals and publications and develops concise analyses for busy policy-makers.

The **DERP Project** is a collaboration of state Medicaid and public pharmacy programs. DERP produces concise, comparative, evidence-based products that assist policy makers and other decision-makers facing difficult drug coverage decisions.

DERP is nationally recognized for its clinical objectivity and high-quality research. It focuses on specialty and other high-impact drugs, particularly those that have potential to change clinical practice. DERP reports evaluate efficacy, effectiveness and safety of drugs to ultimately help improve patient safety and quality of care while helping government programs contain exploding costs for new therapies.

DERP offers:

- **High-Quality Evidence** – DERP offers the best available clinical evidence on which to base policy decisions related to pharmaceuticals. DERP reports compare the effectiveness of drugs commonly used for the same conditions, highlight safety issues, and assist public pharmacy programs to enact policies that help increase the quality of patient care. DERP reports include a comprehensive search of the global evidence, an objective appraisal of the quality of the studies found, and a thorough synthesis of high-quality evidence. Although the reports do not include cost data, policymakers are able to use the reports to make informed policy decisions that save money.
- **Independence Governance -** DERP is the only self-governed national forum available to public agencies. It uses a collaborative model and provides objective research on drug effectiveness to bring evidence to drug policy decisions. DERP reports are independent and objective. The research is conducted by investigators who have no financial or other conflicts of interest in the pharmaceuticals they study.
- **Improved Drugs Safety and Efficiency –**
    - DERP reports are used to develop prior authorization and drug utilization management policies
    - One state, using DERP reports for its preferred drug list, estimates approximately $37 million in costs avoided over five years, and another state estimates $80 million per year
    - Reports include up-to-date clinical evidence on adverse events and safety information of the drugs reviewed and have highlighted risks associated with the drugs studied before other sources
    - DERP reports are used to develop practice guidelines and provider education products to manage drugs with substantial off-label use
- **Drug Reports under Development include:**
    - Anticoagulants

- Antiplatelets
- Atypical Antipsychotics
- Controller Drugs for Asthma
- Diabetes Drugs
- Hepatitis C Drugs
- Multiple Sclerosis Drugs

Many of these reports and activities dovetail with the CQMs on which EPs and EHs must report for demonstrating MU under the NC Medicaid EHR Incentive Program. Expanding availability of evidence-based resources will provide NC more robust sources of best practices and the necessary data and information on which to base sound decisions. DMA believes the benefits of both MED and DERP are substantial and desires to request funding for participation.

B.6 Medicaid Technical Infrastructure and Environment

North Carolina Medicaid is currently in the midst of a project to replace its existing MMIS. The Replacement MMIS, NCTracks, will both leverage and contribute data to the emerging HIE technical infrastructure.

NCTracks is being developed under the oversight of a dedicated program office, the Office of MMIS Services (OMMISS), at the direction of the NC DHHS. NCTracks was designed to support the MITA standards. OMMISS has ensured that NCTracks is consistent with the provisions noted in the *North Carolina Statewide HIE Plan*, *Section 6.7*, whereby HIE services supported through the State HIE Cooperative Agreement will comply with all national standards as defined in the *Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology: Final Rule.*

The North Carolina Medicaid Incentive Payment System (NC-MIPS) provides the interface through which eligible professionals and hospitals interact with DMA's HIT Program, as well as functionality for HIT staff to administer the program. NC-MIPS was designed to interface seamlessly with NCTracks for the purposes of sharing provider data and issuing incentive payments. NC-MIPS currently integrates with the early deployment provider services module of NCTracks, the CMS provider registry, and the data warehouse and payment components of the legacy MMIS system. NC-MIPS' payment mechanism will be updated to use NCTracks as the payment mechanism when it becomes available.

Looking forward to 2015, NC-MIPS will receive clinical quality measure data from N3CN's IC through a secure, proprietary interface. The IC houses clinical data repositories which are made available to Medicaid providers in an effort to promote care coordination, improve quality of care and decrease overall expense.

DMA and its partner agencies are moving progressively towards Service-Oriented Architecture (SOA), enabled via the MITA-style Enterprise Service Bus (ESB), as well as a DHHS ESB currently under analysis. DMA is engaged in negotiations to secure clinical data transfer necessary to establish MU via the NC HIE and N3CN. The NC HIE, in addition to its base functionality, shares information with additional repositories such as the NCIR. This exchange is currently completed via file exchange, but is anticipated to employ open standards on the DHHS ESB by 2014. Information exchange will be subject to the provisions and restrictions of the federal HIT rules, as well as existing provisions such as HIPAA.

B.7 Community Care of North Carolina and the N3CN Informatics Center

CCNC and the N3CN IC provide a critical infrastructure upon which North Carolina's "To-Be" Landscape will develop over the next several years. Through the Community Care program, North Carolina has a proven track record of engaging the provider community in meeting cost and quality objectives for the Medicaid program,

and of leveraging public-private partnerships at the local and state levels toward aligned interests. North Carolina is proud of the accomplishments achieved through its partnership with N3CN over the past decade, which broadly include:

- Building primary care medical home infrastructure for the Medicaid population;
- Establishing a culture of quality improvement, comprehensive patient-centered care, and care coordination across care settings; and, reducing healthcare costs while raising the standard of care in North Carolina.

With over 4,500 primary care providers and over one million Medicaid recipients participating in the Community Care program statewide, and the active engagement of virtually all NC hospitals, health departments, departments of social services, and local mental health management entities, Medicaid has been a principal catalyst for quality improvement in North Carolina healthcare for years. The ARRA now affords an unprecedented opportunity to take a quantum leap forward toward a more effective, higher quality, less wasteful care delivery system and a healthier population.

The existing data interface between the MMIS and the N3CN IC extends the reach and value of MMIS enhancements to a large, statewide user community: providers, provider extenders, and care managers directly involved in the care of the Medicaid population. Through the CMIS, Pharmacy Home, Reports Site, and Provider Portal applications described previously in this document, the goal of the Informatics Center is to put *the right information in the right hands at the right time* to promote evidence-based, patient-centered care by a coordinated care team.

As we promote and enable widespread adoption of EHRs among Medicaid providers and build statewide infrastructure for HIE among those provider systems, we are well-positioned to accelerate the meaningful use of that HIT/E capacity toward tangible improvements in efficiency, quality, and value in the Medicaid program. In addition to improving care, the N3CN IC will play an important role in enabling DMA HIT to verify meaningful use of CEHRT as DMA leverages the IC to collect and analyze practice-derived data from EHR systems. The goal is three-fold:

1. To expand connectivity between providers and the N3CN IC, advancing the meaningful use of their EHRs and the clinical data they collect.
2. To enhance the current capacity and functionalities of the IC to accommodate meaningful data collection and analytics.
3. To make the N3CN IC the vehicle for collecting meaningful use quality metrics for all professionals statewide who are eligible for the NC Medicaid EHR Incentive Program for the life of the program.

In 2012, N3CN became the first Qualified Organization (QO) in North Carolina to connect to the NC HIE. To begin this work, N3CN partnered with NC HIE to begin to build connectivity to CCNC practices as well as all non-CCNC professionals eligible for the NC Medicaid EHR Incentive Program who request the service. This is a future project which is still under development. NC will report on the statistics from this project as data is made available. Expanded connectivity will allow the IC to collect real-time clinical data to supplement claims information, creating more robust, complete records of patient activity in N3CN applications and reporting systems. This new capacity will accelerate the meaningful use of EHRs and clinical data for all connected practices, resulting in better care coordination, improved outcomes, and decreased health expenditures, enabling delivery of a higher level of care to North Carolina patients.

In addition to expanding connectivity and enhancing the IC's current functionality, N3CN will act as the state's Clinical Data Repository (CDR) for the purposes of meaningful use reporting for the Program. In this role, the N3CN IC will collect clinical data from program participants as needed and provide meaningful use reporting to

the State. In 2014, EPs and EHs will be required to submit quality measures to Medicaid electronically via the N3CN IC Provider Portal or through direct collection by N3CN from connected EHRs. In 2013, the IC will interface directly with NC-MIPS to provide electronic submission of the data necessary for meaningful use attestation.

The diagrams below (**Figures 11 and 12**) illustrate the roles and features of the IC pertaining to 1) direct patient care delivery and care management; and 2) quality reporting and performance feedback, utilization management, evaluation, and program management. Existing and future data streams are represented by solid and dashed lines, respectively.

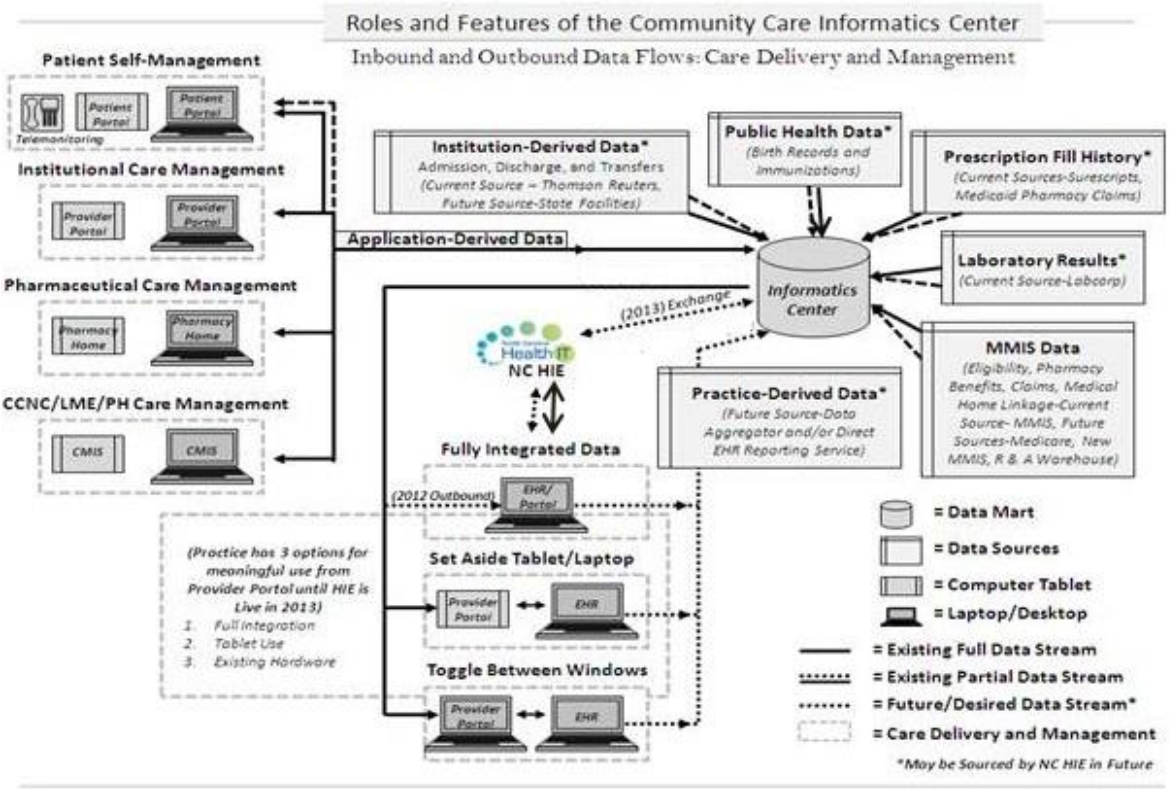


Figure 11 - Existing and proposed data flows for care delivery and management

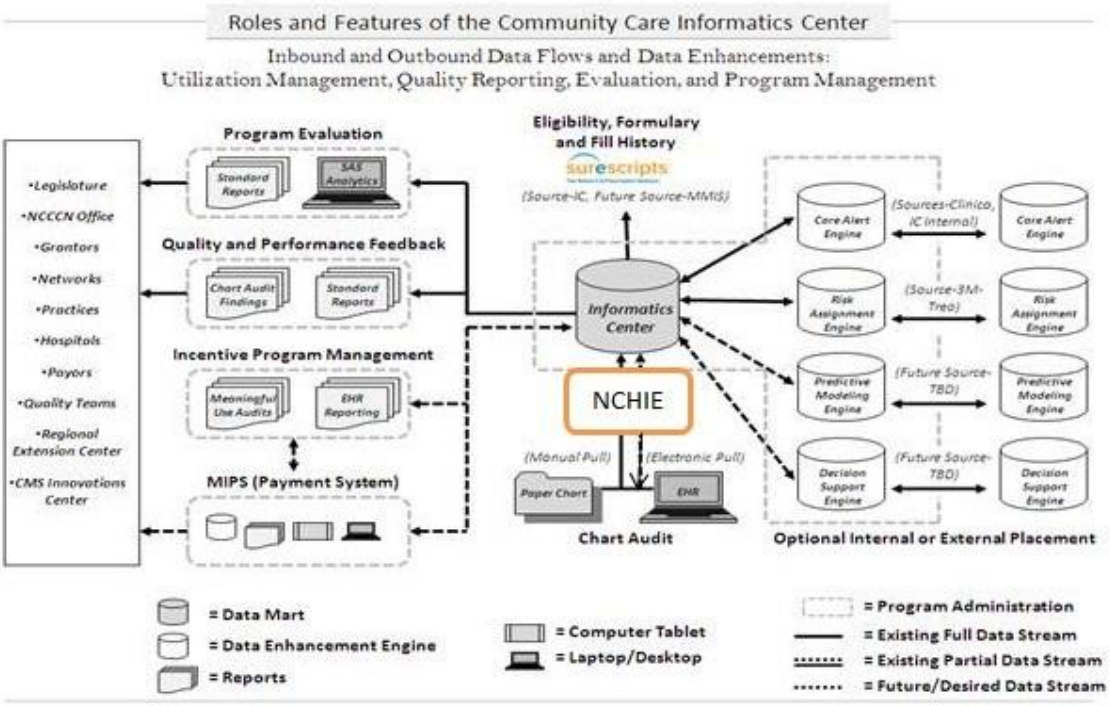


Figure 12 - Existing and proposed data flows for utilization management, quality reporting, evaluation, and program management

B.8 Special Needs Population

The EHR Incentive Program has broad appeal to EPs and EHs who serve the Medicaid population; however, NC is working to ensure that the needs of the most vulnerable are considered within the administration of the NC Medicaid EHR Incentive Program.

One example is the priority North Carolina places on the integration of the NCIR. The NCIR is a secure, web-based tool that serves as the official source of NC's immunization information. It provides electronic access to all of NC's Local Health Departments (LHDs). While it contains data for individuals of all ages, the importance and utilization of immunizations is greater for children, who compose approximately 50 percent of Medicaid's enrolled beneficiaries. NCIR integration with the NC HIE is a high priority for the NC DHHS. Outreach and technical assistance to professionals whose specialties are focused on caring for children (i.e., pediatric, family practice) is a priority for referrals to the RECs and follow-up programs.

Another example of DMA's focus on Medicaid children is the CHIP. On February 4, 2009, CHIPRA was enacted. This legislation marked a new era in children's coverage by providing states new funding, new programmatic options, and a range of new incentives for covering children through Medicaid and CHIP. One of the clear goals of the legislation is to support states in developing efficient and effective strategies to identify, enroll, and retain health coverage for uninsured children who are eligible for Medicaid or CHIP but not yet enrolled in these programs.

As mentioned in *Section A.5.9.1: CHIPRA Grant Categories*, CHIPRA has four separate categories and initiatives. One of these initiatives, Category D, targets pediatric practices and some family practices to better help them understand their EHR's capabilities. By helping these providers ask their vendors targeted questions about the functionalities they need to improve care for their specific populations, they can align their existing QI initiatives

with the technology. Category D also includes the topic area of the model called "Children with Special Needs." In this section and throughout the model pediatric EHR, children with special needs are given strong consideration in relation to system requirements. In fulfilling the grant's requirements, North Carolina is utilizing the model to educate EHR vendors on the needs of children and demonstrate to providers how EHRs can assist them in efficiently meeting those needs.

B.9 Effect of State Law

The NC HIE Legal/Policy Workgroup was charged with addressing the legal issues and/or barriers to the adoption of HIT. Prior to the enactment of recent legislation described in *Section A.12: State Law and Regulatory Changes to Support the EHR Incentive Program*, North Carolina law contained a complex mixture of opt-in and opt-out provisions based on provider type, communicable disease and minor's consent rules. As amended, North Carolina laws that impact healthcare providers' disclosure of patient information are consistent with the HIPAA Privacy and Security Rules. The North Carolina HIE Act, codified in Article 29A of Chapter 90 of the NC General Statutes, is intended to improve the quality of healthcare delivery within North Carolina by facilitating and regulating the use of a voluntary, statewide HIE network for the secure transmission of patient information among healthcare providers and health plans in a manner that is consistent with HIPAA. The Act also ensures individuals have control over the use and disclosure of their information through the HIE Network by providing individuals with a continuous right to affirmatively decide to disallow his or her patient information from being disclosed through the statewide HIE Network through an opt-out process. The Act eliminates inappropriate statutory barriers to the adoption and use of EHRs that previously existed throughout North Carolina law.

C. Administering and Overseeing the EHR Incentive Program

C.1 Program Organization, Management and Oversight

This section gives a high-level overview of the NC Medicaid EHR Incentive Program. Included herein is the general approach to managing the program, the history of its oversight, and the roles and responsibilities of the DMA HIT Team and four core workgroups that currently contribute to its successful operation.

C.1.1 General Policy Goals

The DMA HIT Team is tasked with promoting the adoption and MU of CEHRT in NC. This is achieved through supporting providers, administering incentive payments consistent with program rules and state and federal policy, and engaging stakeholders and organizations statewide to advance the adoption and meaningful use of CEHRT. The NC Medicaid EHR Incentive Program aims to expand connectivity and interoperability throughout the state by leveraging the statewide HIE to improve efficiencies for Medicaid providers and patient care for Medicaid beneficiaries.

C.1.2 Program Organization and the DMA HIT Team

C.1.2.1 Early Management and Approach

Early planning activities and initial administration of the NC Medicaid EHR Incentive Program were carried out by various workgroups through OMMISS. In order to accelerate the launch of the program in NC, a mix of state personnel and contracted resources at OMMISS devised the following plan for its first program year. With the assistance of CSC and Quarterline, OMMISS built and launched the NC-MIPS, consisting of programs and processes to ensure EPs and EHs have met the federal and state statutory and regulatory requirements for the EHR Incentive Program. To begin making incentive payments in early 2011 and avoid making modifications to the legacy MMIS set to be replaced in July 2013, OMMISS developed a strategy to make payments initially through the North Carolina Accounting System (NCAS) with interfaces to the CMS R&A and the EVC. In mid-2011, the first incentive payments were disbursed to NC providers.

C.1.2.2 Structure and Oversight

Administration and oversight of the program were moved from OMMISS to DMA in 2011, while the technical and operations functions of NC-MIPS remained at OMMISS. State staff were added to DMA starting in July 2011, with a dedicated DMA HIT Team taking shape in the last quarter of 2011. The DMA HIT Team oversees provider outreach and communication, quality assurance, budget, appeals, and audit activities. Over the course of 2012-2013, all NC-MIPS functions will also transition from OMMISS to DMA.

2011-2012

Until April 2012, OMMISS continued to manage the technical development of NC-MIPS. This effort employed a range of part-time technical staff at CSC in 2011, and eight full-time developers in 2012. The NC-MIPS development contractors were transferred to DMA in April 2012. As of December 2012, OMMISS continues to manage the NC-MIPS Help Desk and operations activities, which employed four staff in 2011-2012. DMA anticipates moving the operations activities in-house in early 2013, simultaneously reducing the number of staff needed for both development and operations from eight to six and four to one, respectively.

Figure 13 below shows the NC-MIPS staff in addition to the DMA Program Staff, in 2011.

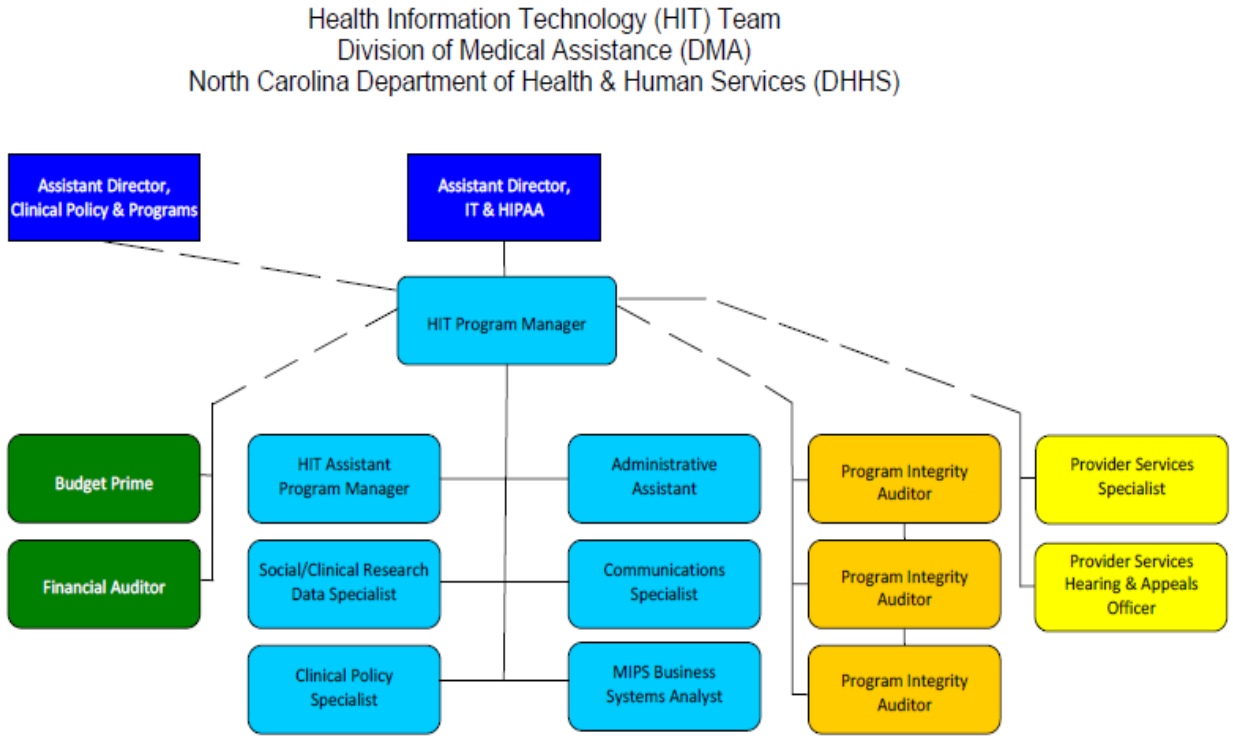


Figure 13 - DMA HIT Team Organizational Chart (2011-2012)

**Job descriptions for the roles in the above Organizational Chart can be found in the 2013 section below.*

In April 2012, NC-MIPS development efforts moved from OMMISS to DMA to reduce contractor costs and improve efficiencies. As of December 2012, OMMISS continues to be involved in NC-MIPS operations activities through its MMIS contractor, CSC. CSC staff assists with provider enrollment, attestation, and incentive payment processes through the NC-MIPS Help Desk.

In October 2013, the Program Integrity staff moved from DMA's Program Integrity Section to DMA's Health IT Team. In 2014, DMA expect to convert the NC-MIPS contract positions to State staff. **Figure 14** below represents all staff expected to contribute to the administration, operations, and systems of the NC Medicaid EHR Incentive Program in NC as of April 2014.

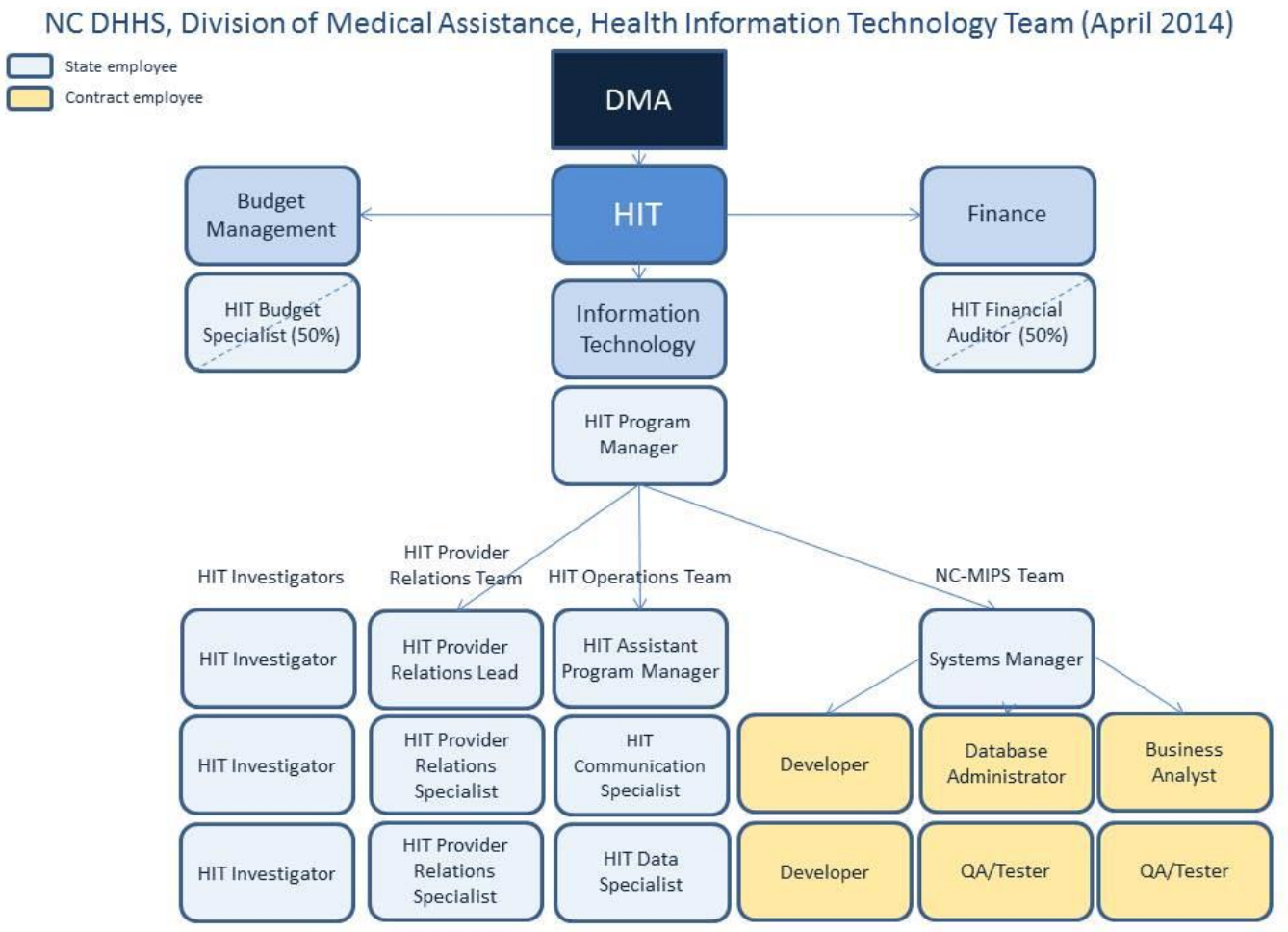


Figure 14 - DMA HIT Team Organizational Chart (2014)

The roles and responsibilities of the DMA HIT Team members are as follows:

Assistant Director, IT & HIPAA

(2011-2012 Organizational Chart only- oversees HIT Program Manager)

Monitors progress on the overall development of the DMA HIT Team and successful implementation of the NC Medicaid EHR Incentive Program. Reports upward within and outside DMA on NC Medicaid's progress toward federal and state HITECH goals and mandates.

Assistant Director, Clinical Policy & Programs

(2011-2012 Organizational Chart only- remains involved with HIT as an advisor)

Provides high-level guidance and direction to the HIT Program Manager and Clinical Policy and Research arm of the DMA HIT Team. Serves as the liaison between DMA Clinical Policy Chiefs and DMA HIT staff, identifying areas of opportunity for HIT within Clinical Policy & Programs.

HIT Program Manager

Responsible for the overall planning, management, implementation, and oversight of the NC Medicaid EHR Incentive Program. Core responsibilities include: directing activities of the DMA HIT Team and four workgroups toward federal and state program goals, ensuring adherence to CMS-approved budgets and work plans, and acting as the main program contact for CMS and other states.

HIT Assistant Program Manager

Leads clinical quality improvement initiatives, including MU planning and devising and tracking program performance metrics. Coordinates DMA HIT Team efforts with statewide HIE, N3CN, and other divisions within DHHS.

HIT Administrative Assistant

(2011-2012 Organizational Chart only- no longer planned staff)

Serves in a variety of administrative capacities to provide support to the DMA HIT team and increase communication and improve workflow efficiencies.

HIT Data Specialist

("Social/Clinical Research Specialist" in 2011-2012 Organizational Chart)

Designs and leads HIT data analytics, including NC-MIPS metrics reporting, MMIS data warehouse research, efficacy of outreach efforts, and data synthesis for outward/upward distribution. Tracks and analyzes HIT program performance metrics.

HIT Clinical Policy Specialist

(2011-2012 Organizational Chart only; merged with Asst. Program Manager in 2013)

Serves as the subject matter expert on clinical policy, DMA policy, and all federal regulations governing the program. Works closely with the Assistant Program Manager to identify opportunities for use of clinical data for new policy creation at DMA.

HIT Communication Specialist

Crafts and executes HIT Communication Plan, including messaging, provider outreach, communication gap analysis, program website, articles, bulletins, communication with key stakeholders and partners, and maintenance of the SMHP and the I-APD.

NC-MIPS System Manager

Analyzes and directs NC-MIPS system development on behalf of the DMA HIT Team. Identifies opportunities for streamlining and automating system and workflow processes to meet business needs.

NC-MIPS Development Team

(Includes System Architect, Business Analyst, Database Administrator, QA/Testers, Developers)

At the direction of the NC-MIPS System Manager, develops and maintains the NC-MIPS system consistent with state and federal regulations.

HIT Budget Specialist

Manages HIT State budget, monitors accuracy of incentive payments, provides regular financial reporting and forecasting to HIT Program Manager, and conducts all CMS financial reporting related to HIT, including CMS 37 and 64 reports.

HIT Financial Auditor

Half-time DMA HIT employee; serves as the subject matter expert for hospital payment calculations. Calculates payments for hospitals, creates policy around NC-specific hospital eligibility and attestation requirements, and conducts outreach with hospitals as necessary.

HIT Provider Relations Lead

Heads up NC-MIPS and program Help Desk, supervises HIT Provider Relations Specialists. Responsible for overseeing the pre-payment validation process, including eligibility determination, provider outreach efforts, and eligibility appeals and hearings.

HIT Provider Relations Specialist

HIT representatives that serve as the bridge to DMA's Provider Services unit, responsible in large part for eligibility determination and provider outreach efforts. They are also the subject matter expert in provider communications. These specialists also carry out the eligibility appeals process, advise on pre- and post-payment denial and termination, and conduct hearings.

HIT Investigators

Create and implement pre- and post-payment audit processes for professionals and hospitals; oversee recoupment of payment or overpayment in the case of state error or adverse post-payment review findings.

Workgroups

In addition to the DMA HIT Team, four core workgroups contribute to the continued planning for NC Medicaid HIT. These include:

- NC DHHS HIT Steering Committee (2010-present)
- DMA HIT Stakeholder Group (2012-present)
- Outreach Workgroup (2012-present)
- Clinical Quality and Data Workgroup (2012-present)
- Public Health Workgroup (Beginning first quarter calendar year 2013)

The DMA HIT Team carefully plans and documents the various components of NC Medicaid EHR Incentive Program administration, including NC-MIPS, to ensure separate tracking of activities for funding and reporting purposes. DMA and OMMISS staff not represented in **Figure 14** above, but who contribute part-time to the EHR Incentive Program, complete timesheets to document accurate distribution of effort and funds. This timesheet data goes through a cost allocation program to charge the appropriate amount of payroll expenses to the correct cost centers. Where projects are eligible for various Federal Financial Participation (FFP) rates (i.e., 90 percent administrative, 100 percent incentive payments), this is specified in the last node of the cost center number such that the invoice reviewer codes the payment with the proper FFP funding.

C.2 Outreach and Provider Support

North Carolina seeks to maximize provider participation in the incentive program and, through coordination across multiple stakeholders, will support the provider community using multiple approaches.

C.2.1 Stakeholder Collaboration in Plan Development

Section A: North Carolina's "As-Is" HIT Landscape of the SMHP describes the complex HIT landscape in North Carolina. NC Medicaid has worked closely with NC OHIT, OMMISS, CSC (the replacement MMIS vendor), Truvent (the replacement Reporting and Analytics system vendor), The NC State Controller's Office, NC HIE, N3CN, the REC and other stakeholder groups to develop the SMHP and will continue to do so throughout the life of the program.

C.2.2 HIT Communication Plan

NC Medicaid has developed a comprehensive communication plan for the EHR Incentive Program that addresses the communicative plans and projections for the program. The original document was created at the onset of the Program in 2010 and was revised in May to reflect the challenges, opportunities and outreach activities for Program Year 2013. This document is available to CMS upon request. The plan looks to achieve several goals including:

- Increase website traffic by 15 percent year over year;
- Increase awareness of program and flow of information by 15 percent within provider community;
- Increase awareness of program and flow of information by 15 percent within DHHS and stakeholder communities; and,
- Increase number of second year participants by 15 percent from 2012 to 2013.

In November 2011, the Office of the National Coordinator for Health IT (ONC) set a goal together with the DMA HIT Team of making 2,000 payments to EPs and 45 payments to EHs by the end of 2012. As of November 2012, the NC Medicaid EHR Incentive Program has exceeded that goal and continues to steadily grow the number of program participants. New communication goals in 2013 will focus on increasing the number of providers who are coming back to attest for MU in years two through six and ensuring they have the proper knowledge and resources to do so. Those messages include:

- Incentive money;
- Improved quality of care;
- Improved practice efficiencies;
- Improved technology;
- Increase number of providers connecting to NC HIE;
- Medicare penalties in 2015 if not deemed a meaningful user of CEHRT; and,
- The NC Medicaid EHR Incentive Program will work with providers to deliver help.

The continued communicative efforts will focus on disseminating these messages, and provider education through different channels including the NC Medicaid EHR Incentive Program website, a monthly Medicaid Provider Bulletin, the HIT Outreach and Stakeholder workgroups, articles in partner organization newsletters, webinars, direct marketing, and presentations to external stakeholders.

To gauge the effectiveness of communication activities with external stakeholders, DMA will administer a survey at least every two years to monitor the provider community's awareness of and engagement in the NC Medicaid EHR Incentive Program, MU requirements, and other federal and state HIT initiatives. The survey targets Medicaid-enrolled providers and will allow DMA to gauge participation in the program, EHR adoption rates, perceived benefits of using CEHRT, and possible barriers to adoption and HIE. Analytics will provide valuable information about our audiences and enable more targeted outreach efforts.

As we move toward Stage 2 MU, communication from the NC Medicaid EHR Incentive Program will be focused on delivering a consistent message and making the differences between AIU, Stage 1 MU and Stage 2 MU as clear and transparent as possible.

To determine the relative success of these efforts, DMA will evaluate the effectiveness of its communication endeavors annually through quantitative measures and goals outlined in the HIT Communication Plan.

The NC Medicaid EHR Incentive Program has ramped up its outreach efforts over 2012 and will continue to do so in 2013. Some examples of 2012-13 activities include:

- NC Medicaid EHR Incentive Program website (Refer to *Section C.2.2.2: NC Medicaid EHR Incentive Program Website*);
- Medicaid Special Bulletin regarding the NC Medicaid EHR Incentive Program;
- Enhanced EH & EP Attestation Guides for NC-MIPS 2.0;
- Direct advertising/marketing including postcards mailed to 4,667 potentially eligible EPs who have not yet attested with the NC Medicaid EHR Incentive Program;
- Visual materials to explain program requirements, programmatic changes, calculations, etc. to the provider community (Refer to *Section A.1.1: EHR Surveys*);
- Internal Trainings with DMA Staff;
- Phone Calls – Average ~70 calls per week; and,
- Emails – Average ~350 emails per week.

To see provider outreach via partners, refer to *Section 2.2.1: Provider Outreach via Partners*.

C.2.2.1 Provider Outreach via Partners

The NC Medicaid EHR Incentive Program works closely with a number of internal and external stakeholder and partner groups to disseminate program updates and messages as they become available. In 2012, the DMA HIT Team focused heavily on reaching out to internal and external partners to ensure a consistent and accurate message was being delivered to our partners and the provider community. These activities include:

1. Quarterly NC Medicaid HIT Stakeholder Meetings (March, May, and September 2012). Participants include representatives from:
    - NC AHEC (REC);
    - NC OHIT;
    - NC Office of Rural Health;
    - NC Community Health Centers Association;
    - NC Hospital Association;
    - NC Medical Society;
    - NC Dental Society;
    - NC Pediatric Society;
    - NC Psychiatric Association;
    - NC Academy of Family Practice;

- NC Academy of Physicians Assistants;
- NC Psychiatric Association; and,
- NC Council of Nurse Practitioners.

- Quarterly NC Medicaid HIT Outreach Workgroup. Participants include representatives from:
  - NC AHEC (REC);
  - NC Community Health Centers Association;
  - NC Dental Society;
  - NC Office of Rural Health; and,
  - NC Medical Society.
- Survey targeted to EPs sent via Medicaid email blast and our HIT Stakeholder Group partners, reaching more than 26,000 Medicaid-enrolled providers. More than 1140 EPs participated in the survey (Refer to *Section A.1.1.1: EHR Surveys - Eligible Professionals)*

- Presentations at DMA Provider Trainings Statewide:
  - 10/9/2012- NC Medicaid EHR Incentive Program 101 in Greensboro.
  - 10/11/2012- NC Medicaid EHR Incentive Program 101 in Charlotte.
  - 10/17/2012- NC Medicaid EHR Incentive Program 101 in Greenville.
  - 10/23/2012- NC Medicaid EHR Incentive Program 101 in Asheville.
  - 10/30/12- NC Medicaid EHR Incentive Program 101 in Fayetteville.
  - 11/1/2012- NC Medicaid EHR Incentive Program 101 in Raleigh.

  Note: This outreach was done in collaboration with Hewlett-Packard and DMA Provider Services' trainings on the NC Medicaid Billing Guide (over 800 providers and practice managers reached)

- Survey targeted to EHs sent through NCHA that collected data around adoption, planned participation in the EHR Incentive Programs, how hospitals would like to be contacted and the information they would like the NC Medicaid EHR Incentive Program to provide. There was a 97 percent participation rate among all potentially eligible EHs (Refer to *Section A.1.1.2: EHR Surveys - Eligible Hospitals)*
- Bi-weekly participation in REC staff office hours calls.
- Webinars to educate REC staff on EHR Incentive Program updates
- NCHICA CIO Roundtable presentations
- MU Webinars for specialists with NCMS
- Presentations at Stakeholder meetings and conferences, including:
  - 3/15/12 – Quarterly Meeting with NC Medical Group Manager;
  - 3/13/12 – Quarterly “4 Schools” Meeting with Duke, UNC, ECU & WFU;
  - 5/11/12 & 8/17/12 – Quarterly “Think Tank” Meeting with NCCHCA;
  - 6/5/12 – Presented NC Medicaid EHR Incentive Program 101 at NC Medical Group Managers Eastern Regional Monthly Meeting;
  - 6/23/12 – Presented MU: Roadmap for Successful Attestation at NCCHCA’s Annual Primary Care Conference;
  - 9/11/12 – Presented MU & patient volume at Southeastern AHEC (SEAHEC)’s Regional Quarterly Meeting;
  - 9/11/12 – Presented NC Medicaid EHR Incentive Program Update on NC HITECH Panel at NCHICA’s Annual Conference;

- 9/13/12 – Presented MU Roadmap for Successful Attestations at NC Medical Group Managers' Annual Conferences;
- 10/9/12, 1/13/13, 4/10/13, 7/10/13, 10/9/13 – NCHICA's CIO Roundtable;
- 3/19/13 – Presented Meaningful Use 101/102 at ECU's MUTT group meeting;
- 3/25/13 – Presented an NC Medicaid EHR Incentive Program overview for NCCHCA;
- 4/26/13 – Presented with N3CN on history of NC HIE, plans to meet Stage 2 MU, Barriers to adoption, solutions to adoption, etc. for national HRSA webinar;
- 5/1/13 – EH outreach – targeted letters/emails to 32 EHs;;
- 5/3/13 – EP outreach – targeted emails to 438 EPs/office managers;
- 5/9/13– Presented Preparing for Stage 2 MU with Mountain AHEC, Several Public Health Departments and WNC districts; and,
- 5/10/13 – Hosted extended stakeholder meeting for all HITECH stakeholders to discuss the HIT landscape in NC and what the future holds for HIT in our state.
- 5/21/13-5/23/13 – Attended CMS HITECH Conference and presented at the PLENARY: Computational Algorithms and HIE: Using Data in a Meaningful Way
- 5/30/13 – Co-Presented w/ N3CN Stage 1 of the Medicare & Medicaid EHR Incentive Programs for Eligible Professionals: First in a Series
- 6/12/13 – Participated in the State HIE Sustainability Webinar: Sustaining HIE Through CMS 90/10 and Other Matching Funding
- 6/17/13, 6/27/13, 7/9/13 – Participated in HIT As-Is meeting at DHHS
- 8/2/13 – Presented at CMS eHealth panel
- 9/9/13-9/11/13 – Presented at NCHICA 19th Annual Conference and Expo
- 12/11/13 – Presented at REC MU Stage 2 Meeting
- 12/16/13 – Toured Rural Health Departments in NC discussing MU Challenges
- 1/8/14, 4/9/14 – NCHICA's CIO Roundtable;
-

In addition to this outreach, the DMA HIT Team recently hosted an 11-week webinar series for the provider community. The 30-minute webinars covered important aspects of the program, while simultaneously allowing providers an open forum for Q&A with NC Medicaid. The webinars were recorded and are available as podcasts on the NC Medicaid EHR Incentive Program website. Topics for the webinar series included:

- An Introduction of the NC Medicaid EHR Incentive Program;
- Stage 1 Changes Per the Stage 1 Final Rule
- Preparing for Attestation;
- Attesting for your Incentive Payment in NC-MIPS;
- Understanding Patient Volume;
- Audits: What to Expect;
- Meaningful Use 101: What is MU?;
- Meaningful Use 102: Looking Ahead to Stage 2 and Beyond;
- Hospitals and the NC Medicaid EHR Incentive Program; and,
- Ask DMA: Two Question and Answer Sessions with DMA.

C.2.2.2 NC Medicaid EHR Incentive Program Website

The Medicaid EHR Incentive Program website is part of the larger DMA website and is located at: http://ncdhhs.gov/dma/provider/ehr.htm. The DMA HIT Team has promoted the website as a one-stop shop for all MU and EHR Incentive Program information. The existing website was reformatted to include expandable

tabbed sections. The website gives providers the most important program information and updates. New sections are added as needed, but the tabs are currently as follows:

- Breaking News – The most pertinent, time-sensitive information is displayed at the top of the website so it is the first thing providers see when they visit the web so it is more impactful for the user.
- NC Medicaid EHR Incentive Program Podcast Series – Nine recorded webinars and their slide deck, which may serve as a reference library for providers.
- Introduction – History of the EHR Incentive Programs, the basic payment information for EPs and EHs, and the program timeline are posted in this section.
- Are you Eligible? – Explains the eligibility requirements for EPs and EHs.
- Patient Volume – This section highlights important information and examples to better understand what is needed to calculate patient volume.
- Path to Payment – Gives providers an overview of the entire lifecycle of attesting for, and receiving an incentive payment.
- Provider Registration and Attestation – Tells providers where they need to register and attest for the NC Medicaid EHR Incentive Program.
- Meaningful Use – Defines MU, the criteria to meet MU, requirements to meet MU and explains clinical quality measures and looks at Stage 1 versus Stage 2 requirements for the program.
- Links – Lists the following commonly used links providers may find useful:
    - NC-MIPS Attestation Portal
    - Centers for Medicare & Medicaid Services EHR Incentive Programs
    - Office of the National Coordinator for Health Information Technology
    - NC Office of Health Information Technology
    - Stage 1 Final Rule
    - Stage 2 Final Rule
    - Interim Final Rule with Comments (Revisions to the 2014 Edition Electronic Health Record Certification Criteria)
    - NC Medicaid EHR Incentive Program Special Bulletin
    - Medicaid Bulletin
- Frequently Asked Questions – Provides a link to the NC Medicaid EHR Incentive Program's FAQ website and a link to CMS' FAQ section.
- Additional Resources – Acting as a quick reference library, this section gives providers any and all tools to help them understand the requirements of the Program and how to navigate through the program.
- Contact Us – Provides contact information for the NC-MIPS Help Desk and the DMA HIT Program office.
- NC Medicaid EHR Incentive Payments Made Around the State – As a recent addition to the Program's website, the DMA HIT Team has added an interactive map of NC Medicaid EHR Incentive payments. End users are able to click on any city in the state and see which counties, cities and specialty types have been paid and the amount they have been paid.
- Partner Updates – As the newest addition to our website, this will be the area in which all partner updates will be posted. We created this section so all partner updates could be in one place without interfering in the *Breaking News!* section.

This website is updated on a regular basis as new information becomes available.

DMA is still working toward creating a website in conjunction with NC OHIT. The site will be a dashboard to show the progress of all HIT activities within the state. In a "HITECH" vein, the new website will have modern and edgy aesthetics and will be intuitive and easily navigable. The site will be designed to engage North

Carolinians through a HIT dashboard of HITECH progress in NC, blogs on emerging issues, video presentations, and graphic interfaces for tracking MU of CEHRT and HIT activities across the state.

C.2.2.3 Medicaid Bulletins

Medicaid Bulletins are the primary vehicle for disseminating messages to the provider community. These monthly e-periodicals are sent to communicate important policy information to all Medicaid-enrolled providers. More than 11,000 practices, professionals, and healthcare entities currently subscribe and access the Medicaid Bulletin via listserv notifications and the DMA website.

In addition to monthly updates sent through the Medicaid Bulletin, the DMA HIT Team created a Special Bulletin released in June 2012 and revised in October 2012. An additional update will be made in January 2013 to accommodate the Stage 1 changes per the Stage 2 Final Rule. The Special Bulletin gives an overview of the NC Medicaid EHR Incentive Program and helps providers navigate complex eligibility and attestation requirements.

C.2.2.4 Medicaid EHR Incentive Program Attestation Guides

DMA has developed attestation guides to help EPs and EHs effectively navigate the attestation process. These guides are available as PDFs online in the following locations:

- The NC Medicaid EHR Incentive Program website
  http://www.ncdhhs.gov/dma/provider/ehr.htm
- The NC Medicaid Incentive Payment System website
  https://ncmips.nctracks.nc.gov/

C.2.2.5 Current State and Gap Analysis

As the program began, North Carolina originally identified roughly 3,500 EPs and 92 EHs who were eligible to participate in the NC Medicaid EHR Incentive Program. As of January 6, 2013 there are NC recognizes that there are more potential participants, including over 2,000 additional EPs, five possible CAHs, and 37 more possible EHs. These provider adoption patterns indicate that continuing outreach efforts targeted towards primary care practices, specialists, and hospitals will be necessary in 2013. DMA gained financial support through the 2013 I-APD for additional REC activities to support the primary care practices, specialty practices and critical access hospitals. As of December 31, 2012, a total of 435 practices are currently connected to the NC HIE. There is an obvious gap in the number of participants in the program, as the goal for 2012 was to connect 6,046 physicians to the NC HIE. Multiple organizations are available to specialists, including the Carolina Center for Medical Excellence, the NC Medical Society, and the REC. NCMS has over 2,800 members practicing in specialty clinics and is currently providing technical assistance to these practices as they work toward MU. CCME and REC technical assistance is available to specialty practices upon request for a fee. In an effort to educate providers and those who work with providers, CCME has trained REC staff and they have hosted webinars and presentations on MU to educate the masses. REC staff is currently working with approximately 15 practices on meeting MU and enhancing their privacy and security provisions.

C.2.3 Statewide NC HIT/HIE Conference

The DMA HIT hosted an NC HIT Stakeholder Summit with all primary stakeholder groups on May 10, 2013 to discuss:

1. Updates/lessons learned/next steps from each of the state's HITECH projects;
2. Changes to the state HIE strategy;
3. Plans for public health reporting capabilities through NC HIE; and,

4. Electronic reporting of MU measures and MU lessons learned.

Timing for this summit corresponded to Medicaid's quarterly HIT Stakeholders Meeting, which included all the organizers, provider organizations, and some of the State/HITECH partners listed below. OHIT and DMA management agreed an expanded meeting, with other State/HITECH partners included, was needed to convene all HIT/HIE/HITECH stakeholders together in person for the first time to bring everyone up to speed on the HIT landscape in NC.

Invited State/HITECH Partners

- NC Medicaid Management and HIT Team
- NC Office of Health IT
- NC Office of Rural Health & Community Care
- NC Area Health Education Centers Program (AHEC) / NC Regional Extension Center (REC)
- North Carolina Community Care Networks/NC HIE
- NC Division of Public Health
- Beacon Community Grant
- Broadband Technology Opportunities Program
- University-Based Training Grant
- Workforce Development in HIT
- NC Telehealth Network
- Children's Health Insurance Program Reauthorization Act
- Comparative Effectiveness Research
- North Carolina Dental Society
- North Carolina Community Health Center Association (NCCHCA)
- North Carolina Hospital Association (NCHA)
- North Carolina Psychiatric Association
- North Carolina Medical Society
- North Carolina Pediatric Society
- North Carolina Academy of Family Physicians
- North Carolina Nurses Association
- North Carolina Academy of Physician Assistants

Speakers:

- NC Area Health Education Centers Regional Extension Centers (AHEC REC)
- Department of Public Health
- NC Health Information Exchange
- State Center for Health Statistics
- Duke University
- NC Regional Extension Centers

Exhibitors:

- WNC Data Link
- Coastal Connect Health Information Exchange
- Region D HITECH Workforce Training
- Microelectronics Center of NC's Broadband Technology Opportunities Program
- NCHICA

- NC AHEC REC
- NC HIE

To take advantage of the momentum the Stakeholder Summit created, and if CMS approves the funding, the first statewide NC HIT/HIE conference will be held in 2014 to educate and inform the healthcare provider and stakeholder community in North Carolina about statewide and nationwide HIT/HIE initiatives, trends and strategic vision. The conference will be co-hosted with N3CN, and attendance is expected to be roughly 150-250 providers and stakeholders for a two-day conference in the Raleigh area. Wake AHEC will handle the logistics, including: registration, promotion, continuing education credit coordination, printing needs and speaker coordination.

The central theme of the event will be "Connected Care in North Carolina." By attending the conference, providers will gain a better understanding of how all members of a patient's care team can leverage HIT/HIE to communicate with each other and coordinate care for individual patients. This concept includes EHR adoption, reaching MU, engaging in HIE, going beyond MU to overall practice QI ("Learning System"), Patient Centered Medical Homes, patient engagement and population health. There will be a special emphasis on key HIT/HIE opportunities that help the care team achieve the triple aim of better care, better health, and lower costs.

In collaboration with its partners, the state has a plethora of goals and objectives for the conference including, but not limited to:

- Show/demonstrate statewide goals and vision for HIT/HIE;
- Give strong practical advice about how to excel at being a provider in this new healthcare environment;
- Show/demonstrate the progress and movement of HIT/HIE within the state;
- Improve DMA's public image by hosting a proactive, informative and educational statewide conference aimed at healthcare providers and related stakeholder groups;
- Build rapport among key stakeholder groups for future collaboration;
- Educate providers around the concept of "Connected Care;"
- Demonstrate the critical need for providers to quickly/readily adopt and utilize health information exchange to improve patient care, reduce hospital re-admissions, and provide continuity of care for the citizens of NC;
- Communicate how health information exchange is leveraged to improve patient-centered care;
- Provide an overview of the NC HIE and how it addresses NC's unique health care needs multi-dimensionally (through health care professionals, consumers, government agencies, payers);
- Highlight examples of applications available through NC HIE; and,
- Highlight a community success story of improved care and efficiencies through HIT/HIE.

The conference will include two large plenary events, one at the beginning and one at the end of the conference. After the first keynote speaker or presentation, attendees will have their choice of concurrent breakout sessions. These sessions will be targeted toward providers in different stages of HIT/HIE implementation. For example, one track will accommodate providers who are brand new to particular concepts and other tracks will focus on information for those providers who are further along (implemented, getting ready for MU and beyond). After the concurrent sessions, we will reconvene for the final keynote speaker, followed by a networking reception. An awards luncheon will be provided for all attendees. The awards will recognize providers and partners in NC who are promoting the adoption of EHR.

C.2.4 NC-MIPS Help Desk and Other Resources

Pursuant to program requirements, North Carolina established an NC-MIPS Help Desk to assist providers with questions and concerns around registration, attestation, and the validation process. The Help Desk began in 2011 as an augmentation of the Medicaid Enrollment, Verification, and Credentialing System Center. The NC-MIPS Operations Team hosted the Help Desk, and it was comprised of CSC staff, including some veteran EVC Help Desk staff. As of June 1, 2013, the NC-MIPS Help Desk moved in-house to DMA to DMA, thereby decreasing the number and cost of support staff. The NC-MIPS Help Desk tracks provider interactions and works with providers to resolve open issues. As part of the NC-MIPS solution, desk procedures and operation guides tailored to supporting both provider and systems operations were developed.

C.3 NC Medicaid EHR Incentive Program Business Requirements

This section details NC Medicaid's business requirements relative to the NC Medicaid EHR Incentive Program.

C.3.1 Participation Periods

Enrollment requirements are defined by program year. North Carolina has a 120-day "tail period" to allow for attestation for a given year beyond the end of that year. The tail period is defined as a period of time beyond the end of the Fiscal Year (for EHs) or Calendar Year (for EPs) during which providers may attest for the prior payment year. For example, EHs had until January 28, 2013 and EPs had until April 30, 2013 to attest for program year 2012.

Enrollment starts with a registration communicated to the state from the CMS R&A, the defined interface for CMS.

DMA determined all NC hospitals are dually eligible for the Medicare and Medicaid EHR Incentive Programs. So as part of pre-payment validation (see **Table 19 & 20** below), DMA checks the C5 and/or CMS' Research & Support user interface to ensure the hospital is attesting on a schedule consistent with their participation in the Medicare EHR Incentive Program.

Eligibility Criteria	CMS R&A Information	State Review and/or Verification Process
EP: Program participation period	Registration	*Verification:* • EP has not already received six years of incentive payments. • Do not allow entry into the program after 2016. • Do not allow any payments after 2021. • Ensure appropriate program year for EPs switching from Medicare or another state.

Eligibility Criteria	CMS R&A Information	State Review and/or Verification Process
EH: Program participation period	Registration	*Verification:* • EH has not already received three years of incentive payments. • Do not allow nonconsecutive participation after year 2016. • Ensure appropriate attestation schedule based on participate in Medicare EHR Incentive Program. • Ensure appropriate program year for EHs switching states.

Table 19- Participation Timeframe Verification

*Note: The *State Review and/or Verification Process* only include those actions taken during pre-payment validation.

C.3.2 Provider Type

NC-MIPS verifies the provider type sent via the CMS R&A user interface against state data for each provider to ensure the professional or hospital is one of the following provider types:

- Doctor of Medicine or Osteopathy;
- Doctor of Dental Surgery or Dental Medicine;
- Nurse Practitioner;
- Certified Nurse Midwife;
- Physician Assistant;
- Acute Care Hospital; and,
- Critical Access Hospital.

In order to qualify at the 20 percent Medicaid patient volume level for a reduced incentive payment, North Carolina recognizes a pediatrician as an EP if they are enrolled with NC Medicaid as a pediatrician, or if they are board certified by a national certification board in a Pediatric, Adolescent or Child medical specialty area.

The following provider types are not currently considered as eligible by the NC Medicaid EHR Incentive Program:

- Doctor of Podiatric Medicine;
- Doctor of Optometry; and,
- Chiropractor.

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
EP: EP type	• Medicaid EP provider type selection from R&A	*Verification:* Using NC Medicaid provider enrollment data and state provider licensure data, crosswalk against provider type and specialty data to validate that provider is enrolled and matches with valid EP type. If a pediatrician attesting at the 20 percent Medicaid patient volume level, check the provider is enrolled as a pediatric specialist with NC Medicaid or has a board certification in a Pediatrics, Adolescent, or child medical specialty area. If a physician assistant, check additional documentation to ensure the provider is generating services at a PA-led FQHC or RHC.
EH: EH type	• Medicaid EH provider type selection from R&A • CCN	*Verification:* Using NC Medicaid provider enrollment data and state provider licensure data, crosswalk against provider type and CCN to validate that provider is enrolled and matches with valid EH type. Using cost report data, validate that ALOS for acute care hospitals is 25 days or less. *Review:* Confirm CCN is in appropriate range.

Table 20 - Provider Type Verification

C.3.3 Basic Eligibility Requirements

The state performs a number of pre-payment verification checks to ensure an EP meets the basic program requirements prior to payment. To demonstrate this effort, the following table describes the basic program eligibility requirements with a description of the pre-payment verification performed by the state.

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
EP & EH: Must be a Medicaid provider in the state.	EP/EH provides NC MPN.	*Verification:* • Ensure provider information matches between the information submitted in the CMS R&A and the EVC. • Confirm an active NC MPN by checking MMIS and the EVC.

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
EP & EH: Cannot be excluded, sanctioned, or otherwise deemed ineligible to receive payments from the state (i.e., already received incentive payment).	N/A	*Verification:* • Search for Public Actions as listed on appropriate licensing agency websites. • Confirm no pending disclosures on the EVC and FileNet Provider Disclosure Summaries. • Check OIG to confirm no exclusions for EP/EH **or** any individual or agency associated with EP/EH that has 5% or more ownership or a managing relationship with the EP/EH. • Search an internal penalty-tracking database to confirm no violations have resulted in penalties or administrative actions against the EP/EH's license. • Search the PI case tracking database for evidence of current or previous cases preventing approval. • Verify no action is pending that would prevent approval by checking the information housed at the Medicaid Investigative Unit.
EP: Practices at a PA-led FQHC/RHC if s/he is a PA	EP submits required documentation.	*Verification:* Verify the supporting documentation which shows the PA is one of the following: • The primary provider in the clinic/center; • The clinical or medical director at the clinic/center; or, • The owner of the clinic/center.
EH: Must have an average length of stay of 25 days or less (acute care hospital only)	N/A	*Verification:* Verify ALOS using summarized claims and discharge data from the Medicaid contracted accounting firm.

Table 21 - Basic Eligibility Requirements

C.3.4 Group Affiliation

North Carolina defines a group as one or more EPs practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization. Group affiliation is validated pre-payment by the NC-MIPS Operations Team by checking the EVC for current group affiliation. If unable to determine affiliation, the NC-MIPS Operations Team performs outreach and requires the EP to provide supporting documentation in the form of a memo, on the group's letterhead, stating the EP's affiliation with the group.

The group affiliation validation process differs slightly for LHDs and Physician Assistants (PAs) working in a PA-led FQHC or RHC.

For PAs, the NC-MIPS Operations Team validates that the PA works in a PA-led FQHC by checking against a list supplied by NCCHCA of known PA-led FQHCs. A similar list does not exist for PA-led RHCs. PAs are also asked to provide a memo on the FQHC or RHC's letterhead speaking to at least one of the following requirements:

1. The PA is the primary provider in the FQHC or RHC (for example, when there is a part-time physician and full-time PA, we would consider the PA as the primary provider);
2. The PA is a clinical or medical director at a clinical site of practice that is an FQHC or RHC; or,
3. The PA is an owner of an FQHC or RHC.

LHDs have historically billed NC Medicaid under their group's Medicaid Provider Number(s) (MPN); therefore, most EPs working in LHDs have not needed to be individually enrolled in Medicaid in the past. In order for these EPs to receive an incentive payment from the NC EHR Incentive Program, they must be enrolled with NC Medicaid and have a unique MPN assigned to them. Because the typical enrollment process can be lengthy and may preclude EPs from being enrolled by the end of the program year (December 31), the NC Medicaid EHR Incentive Program allows EPs affiliated with LHDs to attest during the tail period for the previous calendar/program year, if they have met all other program requirements and they receive a MPN by the date of attestation. For example, for program year 2012, so long as the LHD-affiliated EP is issued an individual MPN and attests by April 30, 2013, they are eligible to receive a 2012 incentive payment.

LHDs are asked to provide a memo on the Health Department's letterhead listing all EPs affiliated with the group prior to attesting. The NC-MIPS Operations team validates group affiliation by checking any LHD-affiliated EPs (using an LHD's MPN(s) to support the patient volume requirement) against the supplied memo.

C.3.5 Patient Volume

This section gives a detailed account of the NC Medicaid EHR Incentive Program's patient volume requirements and pre-payment validation process.

C.3.5.1 Patient Volume for EPs

Providers must supply patient volume data for calculations consistent with the Final Rule. The data will be subject to a series of verifications. Patient volume will be calculated using the encounter-based formula option specified under the Stage 2 Final Rule:

> *Total Medicaid encounters in any representative, continuous 90-day period in the preceding calendar year or 12-month period preceding date of attestation / total patient encounters in the same 90-day period.*

To be eligible for the incentive, EPs must demonstrate 30 percent Medicaid patient volume, unless the EP is a pediatrician, in which case the threshold is 20 percent.

For program years 2011 and 2012, a Medicaid patient encounter was defined as a service rendered on any one day to an individual where Medicaid or a Medicaid demonstration project under Section 1115 of the Social Security Act paid for part or all of the service as stated in the Stage 1 Final Rule. Beginning program year 2013, a Medicaid patient encounter is defined as a billable service rendered on any one day to a Medicaid-enrolled individual, regardless of payment liability. This includes zero-pay claims.

EPs must count actual encounters, defined as a unique patient on a unique day, from their own auditable data source. North Carolina defines an auditable data source as an electronic or manual system that an external entity can use to replicate the data from the original data source to support their attested information.

Medicaid patient volume should be calculated in the following way:

- Numerator: In any continuous 90-day period, any unique encounter (an EP sees a patient for any service) that is rendered to a Medicaid-enrolled individual.
- Denominator: In the same 90-day period, all unique encounters (a patient seen by an EP for any service), no matter the payment method.

Medicaid patient volume from eligible billable services that were not billed or were not reimbursed (zero-pay) should be included separately from Medicaid patient volume from paid claims during attestation. This portion of the numerator cannot be verified during pre-payment validation, but is subject to verification by post-payment audit.

Examples of billable services include:

1. Encounters denied for payment by Medicaid or that would be denied if billed due to exceeding the allowable limitation for the service/procedure;
2. Encounters denied for payment by Medicaid or that would be denied if billed because of lack of following correct procedures as set forth in the state's Medicaid clinical coverage policy such as not obtaining prior approval prior to performing the procedure;
3. Encounters denied for payment due to not billing in a timely manner;
4. Encounters paid by another payer which exceed the potential Medicaid payment; and,
5. Encounters that are not covered by Medicaid such as some behavioral health services, HIV/AIDS treatment, or other services not billed to Medicaid for privacy reasons, oral health services, immunizations, but where the provider has a mechanism to verify Medicaid eligibility.

Further, the Final Rule defines billable as follows:

1. Concurrent care or transfer of care visits;
2. Consultant visits; or,
3. Prolonged physician service without direct, face-to-face patient contact (for example, tele-health).

In NC, we refer to Title XIX expansion CHIP as MCHIP (Medicaid CHIP). Beginning October 2012, per the Stage 2 Final Rule, NC permits these encounters to be counted in the numerator of the patient volume calculation.

For additional up-to-date information on patient volume for EPs, please refer to the NC Medicaid EHR Incentive Program website at http://www.ncdhhs.gov/dma/provider/ehr.htm or *Appendix 8: Patient Volume Methodology Provider Guidance*.

C.3.5.2 Patient Volume for EHs

To be eligible to participate in the program, EHs are required to have a minimum of 10 percent of total patient encounters attributed to Medicaid patients. This percentage is calculated by dividing the sum of Medicaid acute care inpatient discharges and Medicaid ED visits by the sum of all acute care inpatient discharges and all ED

visits in a continuous 90-day period during the preceding federal fiscal year (program years 2011-2012) OR during the 12-month period preceding the date of attestation (program year 2013 and beyond). In accordance with the Stage 1 Final Rule, only Medicaid paid days were eligible for inclusion in the numerator. With the Stage 2 Final Rule published September 2012, EHs may include Medicaid-enrolled zero-pay patient encounters in their numerator beginning program year 2013.

For additional up-to-date information on patient volume for EHs, please refer to the NC Medicaid EHR Incentive Program website at http://www.ncdhhs.gov/dma/provider/ehr.htm.

C.3.5.3 Patient Volume Verification

During attestation, the provider will supply data indicating fulfillment of each of the eligibility criteria in **Table 23** below. NC will review each of the provider-reported eligibility factors to assure that providers are in compliance with the eligibility requirements and, when possible, verify the provider-reported information against available state data. Selected elements will also be subject to post-payment audit.

In pre-payment validation, claims data is used to verify the portion of the reported patient volume numerator where Medicaid paid for part or all of the service. To verify this figure, NC uses paid Medicaid claims as a proxy for encounters, and queries its claims database for the NPI(s) provided during the specified reporting period. NC sums the paid Medicaid claims with the zero-pay reported encounters for the 90-day period for the MPNs listed by the provider in the attestation to attain the verified numerator. This numerator is then placed over the provider-reported denominator to confirm the appropriate threshold is met.

NC performs a pre-payment check on whether the claims data warehouse number is within 20 percent of the paid portion of the EP's attested numerator to ensure that the EP's paid encounter data is in line with Medicaid's. If this check fails, NC performs outreach in an attempt to reconcile the difference between the claims data warehouse number and the paid portion of the EP's attested numerator.

For EPs, only one claim per patient per day per provider is included in the total for the numerator. Global billing codes for certain OB/GYN, dental, and surgery procedure claims are counted more than once toward the total for the numerator to represent the typical number of encounters covered by the one claim. Multi-day claims, where the 'date-of-service' is after the 'from date–of-service', are also accounted for based on the billing code. A list of multipliers with their description can be found in **Table 22** below.

Procedure code	Number of encounters
OBSTETRICAL CARE (59400)	18
VAGINAL DELIVERY ONLY (WITH OR WITHOUT EPISIOTOMY AND/OR FORCEPS); INCLUDING (59410)	6
ANTEPARTUM CARE ONLY; 4-6 VISITS (59425)	5
ANTEPARTUM CARE ONLY; 7 OR MORE VISITS (59426)	9
POSTPARTUM CARE ONLY, SEPARATE PROCEDURE (59430)	3
TOTAL OB CARE W/ CESAREAN DELIVERY (59510)	20
CESAREAN DELIVERY ONLY; INCLUDING POSTPARTUM CARE (59515)	6
COMPLETE UPPER (D5110)	6

Procedure code	Number of encounters
COMPLETE LOWER (D5120)	6
IMMEDIATE UPPER (D5130)	5
IMMEDIATE LOWER (D5140)	5
UPPER PARTIAL ACRYLIC BASE (D5211)	5
LOWER PARTIAL ACRYLIC BASE (D5212)	5
RELINE UPPER DENTURE COMPLETE (LAB) (D5750)	2
RELINE LOWER DENTURE COMPLETE (LAB) (D5751)	2
RELINE UPPER PARTIAL DENTURE (LAB) (D5760)	2
PEDIATRIC PARTIAL DENTURE, FIXED (D6985)	2
SPACE MAINTAINER, FIXED BILATERAL (D1515)	2
MOLAR (EXCLUDING FINAL RESTORATION) (D3330)	2
FIXED BAND TYPE (D1510)	2

Table 22 - Multipliers with Descriptions

If the procedure code is: ANESTHESIA FOR CESAREAN DELIVERY FOLLOWING NEURAXIAL LABOR ANALGESIA/ANESTHESIA (01968); ANESTHESIA FOR VAGINAL DELIVERY ONLY (01960); ANESTHESIA FOR PROCEDURES INVOLVING ARTERIES OF UPPER LEG, INCLUDING BYPASS (01270); ANESTHESIA FOR; ANORECTAL PROCEDURE (00902); ANESTHESIA FOR INTRAPERITONEAL PROCEDURES IN UPPER ABDOMEN INCLUDING (00790); ANESTHESIA FOR HERNIA REPAIRS IN UPPER ABDOMEN; LUMBAR AND VENTRAL (INCISIONAL) (00752); ANESTHESIA FOR PROCEDURES ON EYE; LENS SURGERY (00142); and, there is more than one day between the "from date of service" and the "to date of service," then the number of encounters is two.

If the procedure code is DEVELOPMENTAL SCREENING (96110) and there is no more than one day between the "from date of service" and "to date of service," then the number of encounters will be the number of days between the "from date of service" and "to date of service" inclusive.

If the procedure code is ELECTROCARDIOGRAPHIC MONITORING FOR 24 HOURS BY CONTINUOUS ORIGINAL ECG (93227) or ELECTROCARDIOGRAPHIC MONITORING FOR 24 HOURS BY CONTINUOUS ORIGINAL ECG (93224) and the "to date of service" does not equal the "from date of service," then the number of encounters will equal half the number of days in the timespan from the "from date of service" to the "to date of service" inclusive.

If the procedure code is END-STAGE RENAL DISEASE (ESRD) RELATED SERVICES MONTHLY, FOR PATIENTS 20 YEARS (90961) or END-STAGE RENAL DISEASE (ESRD) RELATED SERVICES MONTHLY, FOR PATIENTS 12-19 (90958) and the "from/to date of service" time span is at least 30 days, then the number of encounters is three.

If the procedure code is END-STAGE RENAL DISEASE (ESRD) RELATED SERVICES MONTHLY, FOR PATIENTS 20 YEARS (90960) and the "from/to date of service" time span is at least 30 days, then the number of encounters is four.

For EHs, DMA verifies Medicaid acute care inpatient discharges and Medicaid emergency department visits using paid Medicaid claims. For emergency department visits, we include claim type hospital outpatient (M)

where the procedure revenue code is EMERGENCY ROOM-GEN CLASS (RC450), EMTALA EMERGENCY MEDICAL SCREENING SERVICES EMERGENCY ROOM (RC451), BEYOND EMTALA SCREENING EMERGENCY ROOM (RC452), URGENT CARE (RC456), or EMERGENCY ROOM-OTHER EMERGENCY ROOM (RC459) and the bill type is Hospital Outpatient Admit through Discharge Claim Admit through Discharge Claim (131) or Hospital Outpatient Interim First Claim (137).

For acute care inpatient, we include claim type Inpatient Crossover (X) and Hospital (Inpatient)(S) where the bill type is Hospital Inpatient Admit through Discharge Claim (117) or Hospital Inpatient Replacement of Prior Claim (117).

NC previously excluded MCHIP encounters from the patient volume claims query in compliance with the Stage 1 Final Rule. In accordance with the Stage 2 Final Rule released September 2012, NC includes MCHIP encounters in the query as of October 1, 2012.

Eligibility Criteria	**Provider-Reported Eligibility Information**	**State Review and/or Verification Process**
EP: FQHC/RHC "practices predominantly"	• FQHC/RHC patient encounters over six-month period within the preceding calendar year (program year 2011-2012 attestations) or 12-month period preceding date of attestation (option for program year 2013 and beyond) • Total patient encounters over same six-month period	*Review:* Assure the reporting period is valid and that reported numbers are appropriate for an individual practitioner and demonstrate over 50 percent of encounters occurred at an FQHC/RHC.
EP & EH: Medicaid volume reporting period	• 90-day reporting period for volume determination	*Review*: Assure that 90-day range falls entirely within preceding fiscal year (for EHs)/calendar year (for EPs) (program year 2011-2012) or 12-month period preceding date of attestation (option for program year 2013 and beyond).
EP: Patient Volume	• Encounters paid by Medicaid over 90-day reporting period • Zero-pay Medicaid-enrolled encounters over 90-day reporting period	*Verification:* Use state claims data (group claims data or individual claims data where EP is attending and/or billing provider where no attending provider is listed) for specified 90-day volume reporting period to verify provider-reported paid Medicaid encounters. If this number plus reported zero-pay Medicaid encounters is under the 30 percent or 20 percent

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
		requisite, request detailed documentation via approved template of provider's encounters for further research. If the claims data warehouse is not within 20 percent of the provider-reported paid Medicaid-encounters, conduct outreach to resolved discrepancy. Note: Zero-pay Medicaid-enrolled encounters and total patient encounters (denominator) are verified only in post-payment audit.
EP: FQHC/RHC "needy individual" volume	• Encounters paid by Medicaid over 90-day reporting period • Zero-pay Medicaid-enrolled encounters over 90-day reporting period • Needy individual encounters over 90-day reporting period, including HealthChoice encounters and uncompensated/reduced fee care encounters • Total patient encounters over 90-day reporting period	*Review*: Using provider-reported information, calculate ratio of encounters to determine if volume meets appropriate level. *Verification:* Using state claims data for specified 90-day volume reporting period verify provider reported paid Medicaid claims. If this number plus reported zero-pay Medicaid encounters and non-Medicaid needy encounters is under the 30 percent or 20 percent requisite, request detailed documentation via approved template of provider's encounters for further research. If the claims data warehouse number is not within 20 percent of the provider-reported paid Medicaid encounters, conduct outreach to resolved discrepancy. Note: Zero-pay Medicaid-enrolled encounters, non-Medicaid needy encounters, and total patient encounters (denominator) are verified only is post-payment audit.

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
EH: 10 percent Medicaid volume threshold	• Medicaid inpatient discharges (Fee-for-service (FFS) and MCO) over 90-day reporting period • Medicaid ED visits (FFS and MCO) over 90-day reporting period • Total inpatient discharges over 90-day reporting period • Total ED visits over 90-day reporting period	*Review*: Using provider-reported information, calculate ratio of Medicaid inpatient discharges and ED visits to determine if Medicaid volume meets 10 percent. *Verification*: Verify that provider-reported data is consistent with claims data for the 90-day volume reporting period.

Table 23 - Patient Volume Pre-Payment Validation

If there is a problem verifying any patient volume data, DMA may request additional information from providers to assist in the validation process.

C.3.6 Certified EHR Technology

To ensure providers are using CEHRT, NC collects and verifies the reported EHR certification ID. This number is tracked by ONC and confirmed via a web service call between NC-MIPS and ONC. Providers are not required to enter their EHR certification IDs during registration in the CMS R&A, but it will be required to update this information in the CMS R&A prior to attesting for an incentive payment with North Carolina. Therefore, providers need to update the CMS R&A with their EHR certification ID if they:

1. Did not provide a EHR certification ID during initial program registration with CMS;
2. Are new to the program; or,
3. Have switched to a different CEHRT (for example, at a new practice site) since their last attestation.

The EHR certification ID will be transmitted to the state and will pre-populate in the NC-MIPS Portal. If this certification ID is not populated or is not accurate in the NC-MIPS Portal, the provider will be asked to update this information in the CMS R&A. The changes should be seen in the NC-MIPS Portal after 24 hours.

Eligibility Criteria	Provider Reported Eligibility Information	State Review and/or Verification Process
EP & EH: EHR Certification Number	EHR Certification number auto-populates from the CMS R&A into NC-MIPS	*Verification:* Interface between NC-MIPS and ONC validates certified EHR number.

Table 24 - EHR Certification Verification

C.3.7 Adopt, Implement, or Upgrade

In the first payment year, providers may receive payments for AIU of CEHRT. The exception to this would be EHs that have already successfully attested with Medicare, where the EH must attest with NC Medicaid on the same attestation schedule (starting with either 90 or 365 days of MU, depending on the Medicare attestation

history). Please note, if an EP switches from Medicare to Medicaid after receiving at least one payment from Medicare that EP must attest to Meaningful Use and is ineligible to receive an AIU incentive payment from Medicaid.

Eligibility Criteria	Provider-Reported Eligibility Information	State Review and/or Verification Process
EP & EH: Demonstration of AIU	Provider attestation of AIU of CEHRT. *Provider is asked, but not required, to submit documentation with the signed attestation, and is advised to maintain documentation for six years in the event of audit.	*Review:* Review attestation of AIU and documentation, if supplied.

Table 25 - EHR AIU Verification

C.3.8 Meaningful Use

North Carolina accepted MU attestations for the first time in program year 2011 (for EHs) and program year 2012 (for EPs). Providers who attest to MU will submit and attest to the same MU measures and clinical quality measures put forth by Medicare. As of January 2013, NC has no additional requirements.

As of January 2013, all NC Medicaid EHs are dually eligible for the Medicare and Medicaid EHR Incentive Programs. Once an EH has submitted a MU attestation on CMS' EHR Incentive Program website, that EH may then attest with NC through NC-MIPS by keying the prior year's Medicaid patient volume data and the current year's MU reporting period (same as Medicare attestation) into NC-MIPS. Additional years of cost report data will not be necessary unless the hospital initially qualified under the rules laid out in *Section C.5.3.2: Payment Calculation for Eligible Hospitals* or recently experienced a change of ownership, merger, divestiture, etc. In the case of the latter, an EH must report the prior year's cost report data each year for payment adjustment until four years of cost report data under a single CCN are recorded (see *Section C.5.3: Payment Calculation for Eligible Hospitals*).

In addition to meeting Medicaid provider eligibility and Medicaid patient volume requirements, EPs who are demonstrating MU must attest to the requirements listed below to receive a Stage 1 MU payment. In 2013, all MU measures will be keyed into NC-MIPS by the EP and will undergo state review.

Eligibility Criteria (EPs only)	Provider Reported Eligibility Information	State Review and/or Verification Process
90 or 365-day reporting period within calendar year that is the same as the program year	Input of accurate reporting period that is the same as the program year	*Review:* Ensure input period is valid.

Eligibility Criteria (EPs only)	Provider Reported Eligibility Information	State Review and/or Verification Process
At least 50 percent of patient encounters occur at a location with CEHRT	Input of at least one such location and attestation to the measure.	*Review:* Ensure at least one location is entered and EP has confirmed that at least 50 percent of their patient encounters occur at a location with CEHRT.
80 percent of unique patients at CEHRT-enabled locations have structured data recorded in the CEHRT	Yes/No.	*Review:* Ensure "Yes" is checked to Core Measure numbers 3, 5 and 6.
Demonstration of meeting Stage 1 core measures	Input of Yes/No, numerators/denominators, and/or exclusion, as they apply to each measure.	*Review:* Review completion and system-generated acceptance of all measures and any exclusions.
Demonstration of meeting five of 10 Stage 1 menu set measures, including one public health measure	Input of yes/no, numerators/denominators, or exclusion, as they apply to each measure.	*Review:* Review completion and system-generated acceptance of five measures and any exclusions. Ensure at least one attested measure is from the public health list.
Demonstration of meeting six CQMs, including three core or alternative set, and three additional	Input of numerators/ denominators for three core measures or three alternative set measures (alternative set required for any core measures with a denominator of zero); and any three additional measures.	*Review:* Review completion and system-generated acceptance of the six measures, ensuring all core or alternative set measures and additional measures were successfully submitted.
Attestation to MU of CEHRT	Box checked and attestation signed.	*Review:* Ensure box is checked and attestation is signed, indicating attestation to MU of CEHRT.

Table 26 - Stage 1 MU Verification

C.3.9 Stage 2 Regulation Changes Affecting Stage 1 MU and 2013 Eligibility Requirements

As a result of the Stage 2 Final Rule released September 4, 2012, there have been changes to the patient volume, practicing predominantly, and several MU Stage 1 measure requirements. See **Table 27** below.

NOTE: The changes below will be in effect for Stage 2 MU in Program Year 2013 and beyond.

Stage 2 Final Rule - Regulation Changes Affecting Stage 1 MU				
Subject	**Change**	**Applicable CFR Rule**	**Effective Date**	**State Review and/or Verification Process**
Patient Volume	**Practicing Predominately Calculations**: Allow EPs to use a six-month period within the prior calendar year or preceding 12-month period from the date of attestation for the definition of practicing predominantly (more than 50 percent of the encounters). States have some flexibility, but all approaches need approved by CMS.	§495.302	1/1/13	NC has fully complied with this change. A system change in NC-MIPS was implemented. The system provides a radio button allowing for the selection of either the prior calendar year or the 12 months immediately preceding the date of attestation. The calendar tool was adjusted to allow a six-month period within the selected timeframe to be entered to comply with the new definition of practicing predominantly. As of 1/1/13, NC deployed this functionality in NC-MIPS. Please refer to Appendix 6: NC-MIPS Portal 2.0 Screenshots
	Medicaid Enrolled Encounters: Numerator to include service rendered on any one day to a Medicaid-enrolled individual, *regardless* of payment liability. Includes zero-pay claims and encounters with patients in Title XXI-funded Medicaid expansions, but not separate CHIP programs (see below).	§495.306	10/1/12 –EHs 1/1/13 – EPs	NC has fully complied with this change. A system change in NC-MIPS was implemented. The patient volume screens ask for additional information about Medicaid-enrolled encounters not paid by Medicaid. As of 1/1/13, NC deployed this functionality in NC-MIPS. NC had no EHs that required this functionality in the system prior to its availability on 1/1/13. Please refer to Appendix 6: NC-MIPS Portal 2.0 Screenshots
	CHIP Encounters: Provider patient volume includes CHIP encounters in numerator *if part of Title XIX expansion or part of Title XXI expansion* (still cannot include CHIP stand-alone Title XXI encounters).	§495.306	10/1/12 –EHs 1/1/13 – EPs	Note: NC refers to Title XIX expansion CHIP as MCHIP (Medicaid CHIP). NC previously excluded these encounters from the patient volume claims query. Beginning October 1, 2012, NC no longer excludes these MCHIP encounters. No change in NC-MIPS was required, as the patient volume claims query is currently performed outside of the system.
	Panel Methodology: Change the period during which an encounter with a patient must take place from 12 months to 24 months to account for new clinical guidelines from the U.S. Preventive Health Services Task Force that allow greater spacing between some wellness visits.	§495.306	10/1/12 –EHs 1/1/13 – EPs	Panel methodology is not applicable to NC.
	Provider, Panel and Needy Individual Patient Volume: Allow the provider to have their patient volume reporting period to be any consecutive 90-day period within the prior calendar year or preceding 12-month period from the date of the attestation. States have some flexibility, but all approaches need approved by CMS.	§495.306	10/1/12 –EHs 1/1/13 – EPs	NC fully complied with allowing the provider to choose any consecutive 90-day period within the prior year or the preceding 12-90-daymonth period from the date of attestation. A system change in NC-MIPS was implemented. The system provides a drop-down menu allowing for the selection of either the prior calendar year or the 12 months immediately preceding the date of attestation. The calendar tool was adjusted to allow a 90-day period within the selected timeframe to be entered. As of 1/1/13, NC deployed this functionality in NC-MIPS. Please refer to Appendix 6: NC-MIPS Portal 2.0 Screenshots

Stage 2 Final Rule - Regulation Changes Affecting Stage 1 MU				
Subject	**Change**	**Applicable CFR Rule**	**Effective Date**	**State Review and/or Verification Process**
Exemption from Hospital Based Exclusion for EPs	**Hospital Based Exclusion:** EPs who can demonstrate that the EP funds the acquisition, implementation, and maintenance of CEHRT, including supporting hardware and any interfaces necessary to meet MU without reimbursement from an EH or CAH; and uses such CEHRT in the inpatient or emergency department of a hospital (instead of the hospital's CEHRT) are now eligible for EHR Incentive Payments.	§495.5	1/1/13	NC fully complied with the new hospital-based exclusion. A system change in NC-MIPS was implemented. In addition to the current choices of "Yes" and "No" on the practice predominantly/hospital-based screen, an additional radio button was added asking the EP if they are hospital-based but can demonstrate that they funded the acquisition, implementation and maintenance of CEHRT. As of 1/1/13, NC deployed this functionality in NC-MIPS. Please refer to Appendix 6: NC-MIPS Portal 2.0 Screenshots
Hospital Changes	**Children's Hospital Eligibility**: Revised definition of a children's hospital to also include any separately certified hospital, either freestanding or hospital within hospital that predominately treats individuals under 21 years of age; and does not have a CMS certification number (CCN) because they do not serve any Medicare beneficiaries but has been provided an alternative number by CMS for purposes of enrollment in the Medicaid EHR Incentive Program.	§495.302	10/1/12	NC has no children's hospitals under their own CCN at this time.
	Hospital Calculation Change: Hospitals that begin participation in 2013 and later can now use the most recent continuous 12-month period for which data are available prior to the payment year. Hospitals that began participation in the program prior to the Stage 2 Rule will not have to adjust previous calculations. Previously Medicaid EHs calculated the base year using a 12-month period ending in the Federal fiscal year before the hospital's fiscal year that serves as the first payment year.	§495.310	10/1/12	NC's standard use of the hospital's most recently filed full 12-month Medicaid cost report available prior to the first payment year as the auditable data source required to establish the "Base Year" already adheres to the new Final Rule definition, so no system or process changes are required to comply with this change.
	Hospitals Switching States: Allow a hospital to switch states from where they receive EHR incentive payments provided that both states work together to determine the remaining payments due to the hospital based on the aggregate incentive amount and incentive amounts already paid.	§495.310	10/1/12	Effective 10/1/12 NC fully complied with this change and will work with other states on a case-by-case basis as the situation arises.

Stage 2 Final Rule - Regulation Changes Affecting Stage 1 MU				
Subject	**Change**	**Applicable CFR Rule**	**Effective Date**	**State Review and/or Verification Process**
	The hospital will then assume the second state's payment cycle, less the money paid from the first state. States should consult with CMS before addressing this specific scenario.			
	Dual EH Audits and Appeals: States can have CMS conduct the MU audit and appeals for EHs provided that they: (1) designate CMS to conduct all audits and appeals of EHs' MU attestations; (2) be bound by the audit and appeal findings; (3) perform any necessary recoupments arising from the audits; and (4) be liable for any FFP granted the state to pay EHs that, upon audit (and any subsequent appeal) are determined not to have been meaningful EHR users. Results of any adverse CMS audits (for states that have made the election) would be subject to the CMS administrative appeals process and not the state appeals process.	§495.370	10/1/12	NC drafted an agreement to designate CMS to conduct all audits and appeals of EHs' MU attestations, and included that agreement letter along with Version 3.0 of this SMHP. NC also agrees to the following terms: (2) be bound by the audit and appeal findings; (3) perform any necessary recoupments arising from the audits; and (4) be liable for any FFP granted the state to pay EHs that, upon audit (and any subsequent appeal) are determined not to have been meaningful EHR users.
Stage 1 MU Measures	**CPOE Entered by CMAs:** The revised interpretation allows a credentialed medical assistant (CMA) to be considered a "licensed health care professional" for purpose of computerized provider order entry (CPOE). The CMA must still adhere to State, local and professional guidelines re order entry. Their credentialing would have to be obtained from an organization other than the employing organization."	§495.6	1/1/13 - EHs 4/1/13 – EPs	NC has fully complied with these changes. NC will consider CMAs as licensed health care professionals. Additionally NC will offer the option of an alternate CPOE measure. As of 3/15/13, NC deployed this system change in NC-MIPS. A radio button was added to the measure so that the provider can select the denominator they are attesting to (the number of unique patients or total number of medication orders). In addition, another objective was added to this measure screen and will read, "more than 30 percent of medication orders created by the EP during the EHR reporting period are recorded using CPOE." To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.
	CPOE *Alternate* Measure: More than 30 percent of the medication orders created by the provider during the EHR period are recorded using CPOE.			
	Generate & Transmit eRX/*New Exclusion* – If no pharmacy within organization & no pharmacy within 10 miles who accept electronic submissions**.**	§495.6	4/1/13	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. An additional exclusion was added to this measure for if the EP does not have a pharmacy within their organization and there are no pharmacies within 10 miles of the EP's practice location(s) at the start of his/her EHR reporting period. To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.

Stage 2 Final Rule - Regulation Changes Affecting Stage 1 MU					
Subject	**Change**		**Applicable CFR Rule**	**Effective Date**	**State Review and/or Verification Process**
	Vital Signs *Alternate* Measure: Also allow alternate measure for Vital: More than 50 percent of all unique patients seen by the provider during the EHR reporting period have blood pressure **(for patients age 3 and over only)** and height and weight **(for all ages)** recorded as structured data. **Vital Signs/*New Exclusion*** Any provider who (1) Sees no patients 3 years or older is excluded from recording blood pressure; (2) Believes that all three vital signs of height, weight, and blood pressure have no relevance to their scope of practice is excluded from recording them; (3) Believes that height and weight are relevant to their scope of practice, but blood pressure is not, is excluded from recording blood pressure; (4) Believes that blood pressure is relevant to their scope of practice, but height and weight are not, is excluded from recording height and weight.		§495.6	1/1/13 - EHs 4/1/13 – EPs	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. An additional measure was added to this screen which reads, "More than 50 percent of all unique patients seen by the provider during the EHR reporting period have blood pressure **(for patients age 3 and over only)** and height and weight **(for all ages)** recorded as structured data." The EP will select a radio button indicating which measure s/he will answer: original measure or optional 2013 measure. For the optional 2013 measure, all four of the new exclusion options were added to the measure screen so that an EP can exclude the measure in its entirety, or select alternate exclusions as they apply to the EP's practice (the four exclusions can be found to the left). To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.
	Clinical Information: Electronic transmission of key clinical information: *Remove requirement*		§495.6	1/1/13 – EHs 4/1/13 – EPs	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. The measure's information was removed from the page, but a placeholder screen remains to inform providers of the removal of this measure. To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.
	Report CQMs: *No longer a Core Measure*, now part of MU definition		*n/a*	1/1/13 - EHs 4/1/13 – EPs	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. The measure's information was removed from the page, but a placeholder screen remains to inform providers of the removal of this measure. To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.
	Exchange Key Clinical Info Electronically: *Remove requirement*		*n/a*	1/1/13 - EHs 4/1/13 – EPs	As of 3/15/13, NC deployed this system change in NC-MIPS. The measure's information was removed from the page, but a placeholder screen remains to inform providers of the removal of this measure. To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.
	Immunizations:	Add "according to applicable law and practice"	§495.6	1/1/13 – EHs 4/1/13 – EPs	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. NC changed the objective to read, "Capability to submit electronic data to immunization registries or Immunization Information Systems and actual submission except where prohibited and in accordance with applicable law and practice." To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.

Stage 2 Final Rule - Regulation Changes Affecting Stage 1 MU					
Subject	**Change**		**Applicable CFR Rule**	**Effective Date**	**State Review and/or Verification Process**
	Reportable Labs:		§495.6	1/1/13	Reportable labs are only applicable to EHs. NC does not receive MU measures from hospitals; therefore, no changes are necessary.
	Syndromic Surveillance:		§495.6	1/1/13 - EHs 4/1/13 – EPs	NC has fully complied with this change. As of 3/15/13, NC deployed this system change in NC-MIPS. NC changed the objective to read, "Capability to submit electronic syndromic surveillance data to public health agencies and actual submission except where prohibited and in accordance with applicable law and practice." To see a screenshot, please refer to Appendix 6: NC-MIPS Portal2.0 Screenshots.

Table 27 - Stage 1 Changes per the Stage 2 Final Rule

NOTE: Providers who choose a patient volume reporting period close to the date of attestation may experience a delay in payment due the effect of a Medicaid claims lag on the patient volume pre-payment validation process.

C.3.10 Stage 2 Meaningful Use

As of April 2014, NC is not accepting Stage 2 MU attestations. We are working on onboard contract resources for NC-MIPS that will enable us to modify our system to accept Stage 2 MU attestations. While that is in process, we are working to develop and implement a manual work around process that allowed EPs to attest for Stage 2 without further delay. DMA's target date for having the work around solution implemented is August 2014. DMA's target date for having NC-MIPS operational for Stage 2 MU attestations is unknown at this time.

C.4 NC Medicaid Incentive Payment System (NC-MIPS)

NC-MIPS is a proprietary system built to collect and verify provider attestation data—including enrollment period, provider type, patient volume, and attestation details—for the purposes of administering the EHR Incentive Program in compliance with the Final Rule. NC-MIPS consists of programs and processes to ensure EPs and EHs have met the federal and state statutory and regulatory requirements necessary to receive EHR incentive payments.

At a high level, the NC-MIPS workflow is as follows:

1. Receive registration transactions from the CMS R&A
2. Invite and allow EPs/EHs to attest with NC through the NC-MIPS portal
3. Verify information, determine payment eligibility and payment amount
4. Notify the CMS R&A of eligibility status
5. Coordinate with the CMS R&A to avoid duplicate payments and/or payment errors
6. Make payments according to state business rules
7. Return payment information to the CMS R&A

This workflow requires interaction between multiple systems and users. These interactions include:

- Communication with the CMS R&A using FTP-SSL from a server with a CMS-provided certificate, to a secure, assigned Gentran mailbox. NC-MIPS adheres to national data standards for all such data exchanges.
- Communication with the NC-MIPS portal, where providers create an account, enter information for eligibility determination, complete attestation, and track attestation status. See *Appendix 6: NC-MIPS Sample Screenshots.*
- Communication with the EVC that currently serves providers in parallel with the Legacy MMIS. In late 2013, this communication moved to NCTracks.
- Communication with MMIS to execute the payments once approved.
- Communication with the NC Medicaid claims data warehouse.
- Communication with two user interfaces:
    - Interface 1: used by professionals and hospitals to complete registration, submit attestation data, and view attestation status.
    - Interface 2: used by operations staff to process attestations from eligibility determination to payment.

These interactions and relationships are depicted in **Figure 15** and **Figure 16** below.

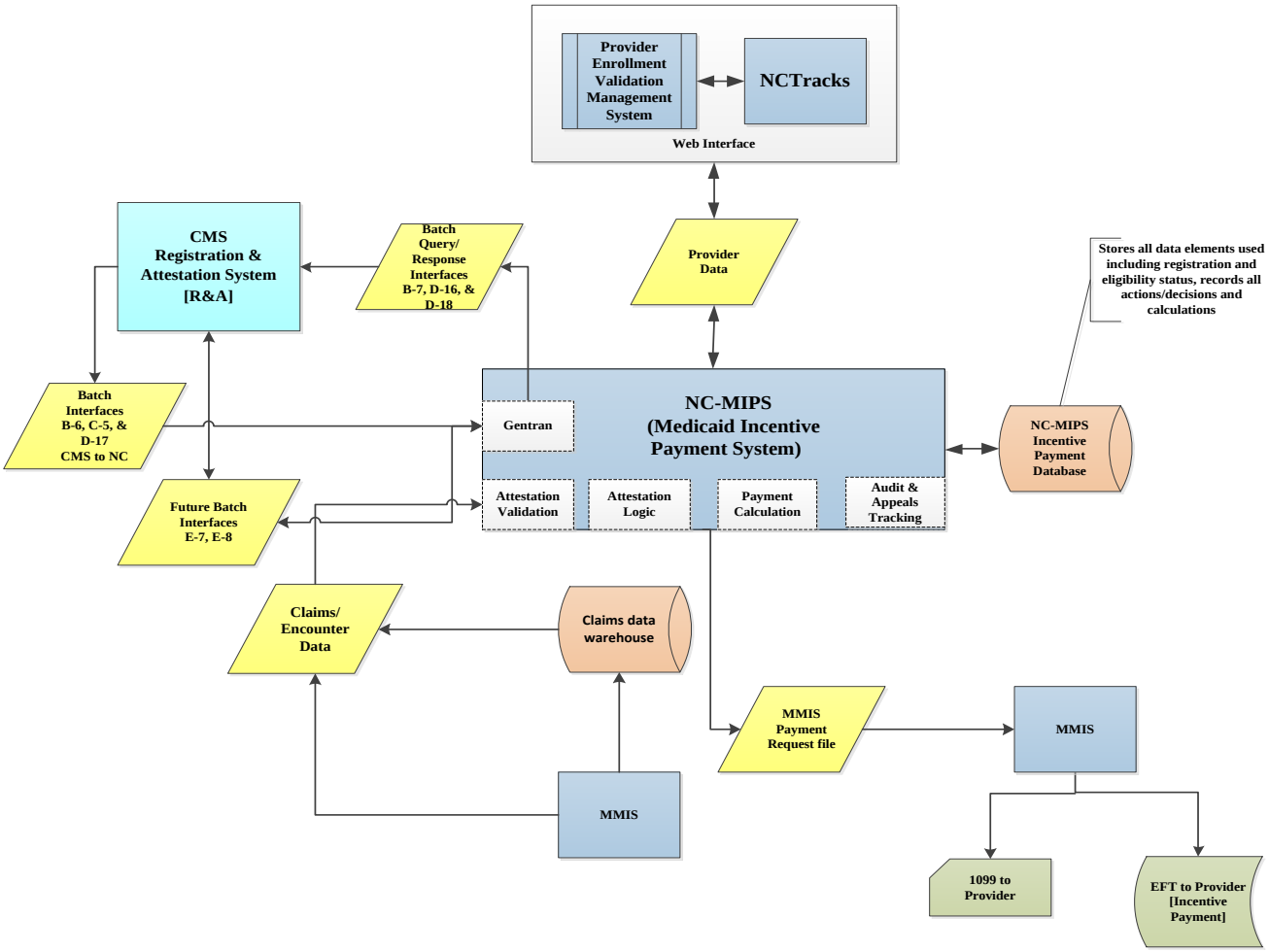


Figure 15 - NC-MIPS Integration

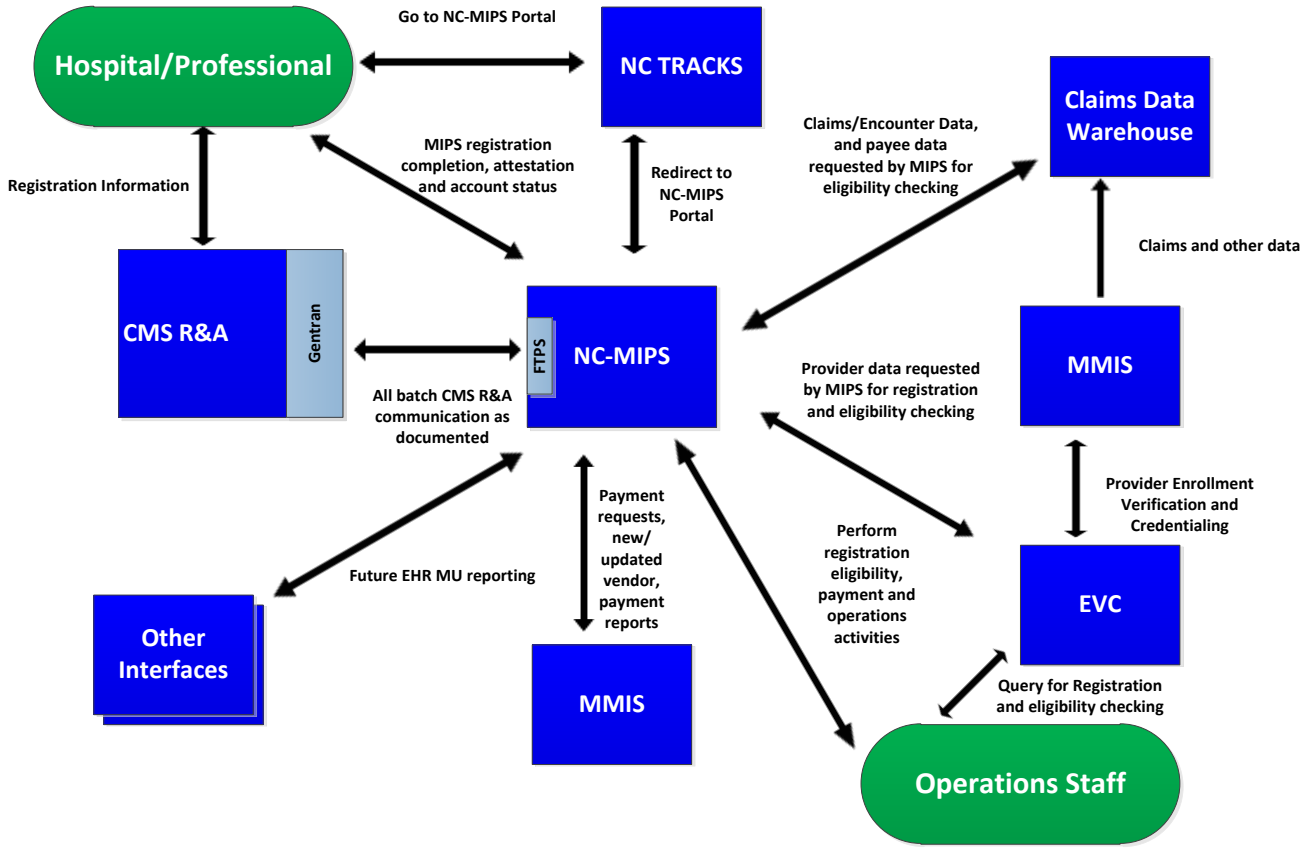


Figure 16 - NC-MIPS Systems Map

Figure 17 below highlights the interaction of providers with the CMS R&A System and NC-MIPS from registration through notification of a payment decision.

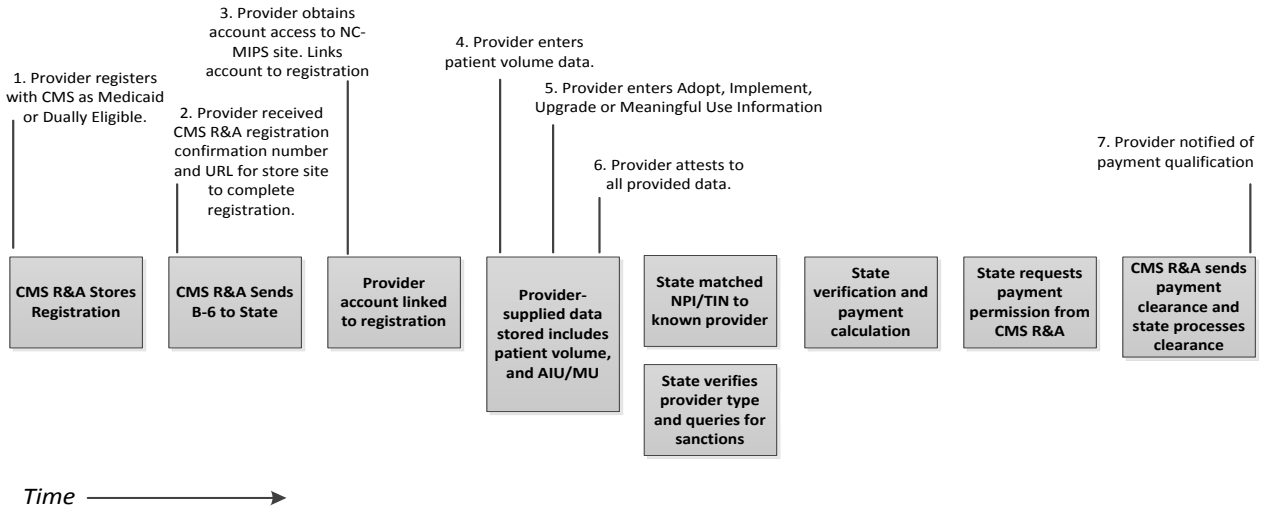


Figure 17 - Provider Interaction with NC-MIPS

NC-MIPS achieved many milestones in 2011 and 2012. In addition, provider communication, system analysis and design, and joint interface testing with CMS precede the milestones laid out here.

2011 (Actual)

- January 1, 2011—Go Live (CMS Registration)
- January 4, 2011—EP Registrations received from CMS
- January 15, 2011—EH Registrations received from CMS
- February 15, 2011—Go Live (NC-MIPS Attestation)
- March 2011—EP Attestations Begin
- March 2011—Go Live (Validation and Payment)
- March 2011—EP Incentive Payments Begin
- September 1, 2011—EH Attestations Begin
- September 31, 2011—EH Reporting Year Ends for FFY 2011
- September 2011—EH Incentive Payments Begin
- November 30, 2011—EH Attestation Deadline for FFY 2011
- December 2011—In excess of $20 Million in Incentive Payments Distributed

2012 (Actual)

Beginning in January 2012, further NC-MIPS development was carried out in-house at OMMISS/DMA by newly added state staff. Early 2012 projects included addition of AIU and MU attestation capability. To accommodate these upgrades, 2012 AIU attestations were accepted through an electronic attestation template in April, May & June. During this time the groundwork for a better attestation validation portal was also underway.

- February 29, 2012—EP Attestation Deadline for CY 2011
- April 1, 2012—Electronic Attestation Template Implementation
- July 23, 2012—Go Live (2012 AIU Attestation through NC-MIPS 2.0)
- August 20, 2012—Go Live (MU Attestation)
- November 30, 2012—Go Live (Replacement Attestation Validation Portal)
- December 2012—In excess of $87 Million in Incentive Payments Distributed

2013 (Actual)

Beginning January 2013, NC-MIPS development will be focusing on various upgrades to the NC-MIPS system to accommodate the following:

- January 7, 2013—Go Live (Stage 1 MU Eligibility Changes)
- February 18, 2013—Advanced reporting functionalities
- February 18, 2013—Audit Tab
- February 18, 2013—File Upload
- March 15, 2013—Go Live (Stage 1 MU Measure Changes)
- May 15, 2013—Advanced Search
- May 15, 2013—Provider Relations & Provider Relations Lead roles in Attestation Validation
- May 15, 2013—Outreach Tab

2014 (Planned)

- Second/Third Quarter - Go Live (Stage 2 MU Measure Changes)
- Fourth Quarter — Enhanced administration functionality

2015 (Planned)

- Second Quarter—Go Live (Full Automation of all CMS Transactions)
- Second Quarter—Payment adjustments
- Fourth Quarter—Claims data warehouse advanced automation
- Fourth Quarter—NC-MIPS Interfaces with NC Tracks (Payment, provider demographic data, claims/encounter data, NCID)

C.4.1 NC-MIPS Activities

Overview

All Providers interested in applying for either Medicare or Medicaid incentives under ARRA are required to register first with CMS. EPs must choose to participate in either the Medicare or Medicaid Incentive Program, while EHs may qualify to participate in both programs ("dually eligible"). Once registered with CMS, any EP or EH applying for a Medicaid incentive payment with North Carolina must apply at the state level through NC-MIPS.

Project Management

The NC Department of Health and Human Services established OMMISS as a Program Management Office (PMO) to oversee the various HIT projects associated with the Replacement MMIS. The Replacement MMIS is a multi-payer initiative with Medicaid, State Children's Health Insurance Program (SCHIP), Public Health, Rural Health, and MH/DD/SAS. The projects that are a part of this effort include the MMIS Replacement, decision support and health informatics, surveillance and utility review, the MITA State Self-Assessment, initial NC SMHP development, and development of NC-MIPS 1.0.

Under the executive sponsorship of the NC Medicaid Director, OMMISS was directly responsible for the design, development, testing, and implementation of NC-MIPS until April 1, 2012. Since that date, NC-MIPS development activities have been overseen by DMA. As of January 1, 2013 OMMISS is still responsible for

overseeing NC-MIPS Operations, planning and coordinating activities with the Medicaid Enrollment Service Center and DMA, and maintaining the necessary processes and staffing to properly support the program as outlined below in the Functional Requirements.

Functional Requirements

There are six major functions required for the administration of incentive payments through the NC Medicaid EHR Incentive Program.

1. Registration

CMS currently provides a mechanism for EPs and EHs to register for the EHR Incentive Programs at the national level through the CMS R&A. Registration information is then collected and stored by CMS, and is sent via a B-6 interface to North Carolina for any EP or EH who has indicated that they would like to participate in the NC Medicaid EHR Incentive Program. After preliminary review, the NC-MIPS system verifies data elements against NC Medicaid data, checking for specific eligibility criteria. If the EP or EH is deemed ineligible at this point, NC updates CMS with this information via a B-7 interface. For EPs and EHs who are deemed initially eligible, a B-7 interface is returned later in the process.

2. Attestation and Qualification

After registration with CMS, NC must collect and analyze information from EPs and EHs to qualify them to receive incentive payments. To qualify for payment in the first year of participation, CMS and NC collect attestations regarding the adoption, implementation, or upgrade to CEHRT; in subsequent participation years, providers must demonstrate MU of that CEHRT. To demonstrate MU of CEHRT, CMS will collect attestations from Medicare participants and dually eligible EHs and states will collect attestations from Medicaid-only participants. Dually-eligible NC EHs that successfully attest with Medicare will be deemed eligible to receive a NC Medicaid payment; in these cases, CMS will send the EH attestation data to NC via a C-5 interface.

The NC-MIPS Operations Team and various internal departments at DMA verify attested data through a series of validation checks. Upon successful attestation and validation, NC checks with CMS before granting final approval to pay the specific EP or EH via a D-16 interface and CMS confirms approval to pay via a D-16 response file.

3. Payment and Settlement

Although it has been determined that NC-MIPS is correctly calculating incentive payments for EPs, the NC-MIPS Operations Team and DMA staff continue to perform some manual steps to verify the accuracy of payment calculations and assignments. In addition, checks are in place to ensure that maximum payment amounts are not exceeded and duplicate payments are not issued.

CMS provides funding to NC for the incentive payments through the grants process. After qualification is determined and CMS has issued final approval, NC delivers the incentive payments to the EH or EP and notifies CMS that payment has been issued. In the case where a provider owes a balance to Medicaid, that amount is withheld from the provider's incentive payment.

As of mid-2011, payments have been made through the existing MMIS system via electronic funds transfer (now the required method of payment for all Medicaid providers). A payment type will be created for incentive payments to be delivered by NC Tracks in 2013.

4. Management of Post-Payment Operations

NC will manage an appeals process that parallels the current process for provider claim payments. The anticipated categories for appeal are:

- Denial of incentive payment due to ineligibility;
- Appeal of incentive payment amount; and,
- Denial based on failure to demonstrate AIU or MU of CEHRT.

The auditing function will implement pre- and post-payment controls to prevent and detect fraud, waste, and abuse.

There are three tenets of the DMA audit approach related to the EHR Incentive Program:

1. DMA will avoid making improper payments by ensuring that payments only go to EPs and EHs, and that payments meet all incentive funding requirements.
2. DMA will review and validate demonstration of MU of CEHRT through a combination of monitoring and validation activities before payments are disbursed and selective audits after payments are disbursed.
3. DMA will prevent and/or identify suspected fraud and abuse through data analysis and selected provider audits.

Post-payment audit functions for AIU in 2012 and the first half of 2013 will focus on:

- Provider Eligibility: verification that providers are Medicaid-enrolled, credentialed, not sanctioned, not hospital-based, practicing predominantly in an FQHC/RHCs (for those using needy individual patient volume), and are one of the eligible provider types recognized by CMS under the EHR Incentive Program regulations;
- Patient Volume: audit of attested Medicaid and total patient volumes, including use of proxy data (such as claims) where appropriate; and,
- Adopt, implement, or upgrade: audit that one of these three actions was accomplished with a CEHRT.

Post-payment operations will be tracked and managed in the NC-MIPS attestation validation workflow portal.

5. Provider Support

The NC-MIPS Operations Team at the existing CSC EVC Call Center supports the NC-MIPS Help Desk to assist EHR Incentive Program participants with registration and attestation. EH and EP-specific Attestation Guides have been developed to walk providers through an attestation on the NC-MIPS Portal. Additional staff, changes to call routing, and additional call tracking capabilities were added to the EVC Cal Center to accommodate this program. Furthermore, the DMA HIT Team supports providers for general program and policy questions through a dedicated e-mail and phone line.

In order to achieve a successful program implementation with NC providers, the DMA HIT Team developed a comprehensive HIT Communication Plan (Refer to *Section C.2.2: HIT Communication Plan*). The plan includes extensive analysis and recommendations for provider outreach, including a host of methods to communicate with providers about the state's plans and resources to assist in EHR acquisition and implementation and to provide information about the necessary registration and attestation process to receive incentive payments.

6. Reporting

The HITECH Act does not require NC to post the name and business address of Medicaid EPs and EHs that received incentive payments to a public website, as required by CMS for Medicare incentives.

NC DHHS and the DMA HIT Team utilize various NC-MIPS reporting tools to manage the program, satisfy CMS reporting requirements, monitor and forecast payments for future years, and provide information to NC Medicaid auditors. The legacy MMIS fiscal agent currently provides, and will continue to provide, 1099 reporting until NCTracks is implemented in mid-2013.

Technical Requirements

NC-MIPS is a stand-alone system that ingests information from multiple external systems, including: 1) EVC for provider data; 2) state data warehouse for claims information; and 3) NC- MIPS database that is separate from existing Medicaid provider data. The solution was built based on a SOA approach, so that services are created to work with both the current Medicaid EVC System and with NC Tracks, upon implementation. The NC-MIPS portal and the NC Tracks website use the same security architecture, which is based on the North Carolina Identity Management (NCID) state standard.

Phases of NC-MIPS

To enable the state to meet aggressive deadlines for interface testing with CMS, to accommodate requirements and technical details that are constantly dynamic, and to allow providers to attest for, and receive, incentive payments as soon as possible in 2011, the design and development of the NC-MIPS sub-system was broken down into multiple phases.

Phase 1 of NC-MIPS was launched in January 2011, and allowed providers to register with NC-MIPS. This release also included the functionalities necessary to interface with the CMS R&A through the B-6 and B-7 interfaces.

Phase 2 of the system was released in March 2011, and allowed providers to attest to AIU of CEHRT as outlined in the Stage 1 Final Rule. This phase included the establishment of a provider portal that allowed for annual attestation and tracking attestation and payment status, as well as deployment of the D-16 and D-18 interfaces with the CMS R&A.

Phase 3 of the system was released in September 2011 to augment the level of automation involved in the attestation validation functionality.

Phase 4 of NC-MIPS (NC-MIPS 2.0) included several upgrades and was deployed in various releases in 2012. This phase allowed MU reporting, further automated transactions, and enhanced attestation workflow functionality.

Phase 5 will be to implement Stage 1 MU and program eligibility upgrades consistent with the Stage 2 Final Rule, further enhance and automate existing functionalities (e.g., e-signature), interface NC-MIPS with NC's replacement MMIS, NC Tracks, and enable Stage 2 MU attestation and validation, including electronic reporting of clinical quality measures. This phase will include various releases in 2013.

Phase 6 will be to implement Stage 2 MU upgrades consistent with the Stage 2 Final Rule. This phase will include various releases in 2014.

NC will continue to add system features to accommodate changing federal and state regulations and program needs.

Table 28 below presents the CMS criteria for readiness to launch the Medicaid EHR Incentive Program as outlined in the State Medicaid Directors Letter dated August 17, 2010, as well as the corresponding NC actions taken to prepare for the initial launch of NC-MIPS.

Criteria	Status
The state has an approved SMHP and an approved I-APD.	SMHP and I-APD approved in December 2010.
The state has initiated outreach and communications about the Medicaid EHR Incentive Program, including posting information on its website.	Complete; see http://www.ncdhhs.gov/healthit/

Criteria	Status
The state has an effective and tested interface to accept provider registration information from CMS.	North Carolina is the first state to test with CMS starting August 2010.
The state is now capable, or will be capable within three months, of accepting provider attestations.	Provider registration opened in January 2011; provider attestation opened in March 2011.
The state is now capable, or will be capable within five months, of making incentive payments to providers.	First provider incentive payments made in March 2011.

Table 28 - CMS Criteria for NC-MIPS Readiness Launch

Tables 29, 30, and 31 below present the timing of the nuts and bolts behind the business process, organizational, application, data, and technological domains of NC-MIPS development.

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Business process: work activities					
Registration	✓	✓	✓	✓	✓
Attestation		✓	✓	✓	✓
Interfaces with CMS R&A	✓	✓	✓	✓	✓
Payment Calculation and Interface with NCAS, then MMIS		✓	✓	✓	✓
Manage Post-Payment Operations – Appeals and Audit					✓
NC-MIPS Help Desk (Customer Support)	✓	✓	✓	✓	✓
Reporting	✓	✓	✓	✓	✓
	Phase 1	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**
Provider Outreach	✓	✓	✓	✓	✓
Quality reporting and storage for MU measures				✓	✓
Organizational: people, teams, departments					
Within NC DHHS and other State offices: 1. OMMIS – Project Management 2. Division of Medical Assistance (Medicaid)	 ✓ ✓	 ✓ ✓	 ✓ ✓	 ✓ ✓	 ✓ ✓
Enrollment and MMIS System contracts: 1. CSC Operations staff supporting NC-MIPS 2. CSC Team supporting NC-MIPS servers 3. CSC Team supporting NC-MIPS development	 ✓ ✓ ✓	 ✓ ✓ ✓	 ✓ ✓ ✓	 ✓ ✓	 ✓ ✓
NC Medicaid Providers	✓	✓	✓	✓	✓

NC Medicaid Beneficiaries	✓	✓	✓	✓	✓

Table 29 - Business Process and Organizational Domains

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Application: business software applications					
Replacement MMIS System (NC Tracks)					✓
CMS R&A	✓	✓	✓	✓	✓
North Carolina NCAS Accounts Payable		✓	✓	✓	✓
Office of the National Coordinator for HIT (ONC) Certified HIT Product List		✓	✓	✓	✓
Data: data items, structures, relationships and business rules for information					
EVC provider enrollment information	✓	✓	✓	✓	✓
Data elements for provider registration, attestation, payment calculation and tracking	✓	✓	✓	✓	✓
Complete audit of all activities in process scope	✓	✓	✓	✓	✓
CMS R&A	✓	✓	✓	✓	✓
NC Medicaid Providers	✓	✓	✓	✓	✓
Medicaid annual cost report extract for hospitals (Medicaid days, managed care days, total inpatient days, total charges, charity care charges, Medicaid discharge numbers, managed care discharges)	✓	✓	✓	✓	✓
	Phase 1	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**
Replacement MMIS and claims data warehouse (NC Tracks)					✓
Legacy MMIS and DRIVE claims data warehouse	✓	✓	✓	✓	✓
Sanction Data		✓	✓	✓	✓
MU measures				✓	✓

Table 30 - Application and Data Domains

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Technological: hardware, system software, communication components, and development tools					
Service-Oriented Architecture (SOA)	✓	✓	✓	✓	✓
Components compatible with J2EE MMIS architecture		✓	✓	✓	✓

Gentran Windows version	✓	✓	✓	✓	✓
Pega systems for workflow/queuing		✓	✓		
MS SQL Server	✓	✓	✓	✓	✓
DB2			✓	✓	✓
NCID		✓	✓	✓	✓
.NET	✓	✓	✓	✓	✓
J2EE			✓	✓	✓

Table 31- Technological Domains

System Life

NC-MIPS was designed to allow the system to be fully integrated with the Replacement MMIS, NC Tracks, SOA upon its release. The systems were designed in parallel to meet state-defined timeframes for early participation in the NC Medicaid EHR Incentive Program, but with careful planning to facilitate future integration. The major change in the system upon integration will be the provider data source moving from the EVC and Legacy MMIS systems to the NC Tracks provider module. The mode of integration will be to link the systems via web services and change the data sources. This transition will coordinate with NC Tracks implementation. Routine operations, maintenance, and system updates are scheduled for the life of the system. NC-MIPS is scheduled to be supported through 2021. Prior to that date, plans for its decommissioning will be developed.

C.4.2 Interface with CMS' Registration & Attestation System

The CMS R&A stores data and controls interfaces necessary to implement the EHR Incentive Programs at the national level. North Carolina and other states use the CMS R&A to coordinate Medicaid EHR Incentive Program activities with CMS. This coordination is managed through specifications laid out in CMS Interface Control documents. As of December 2012, NC participates by using the following defined interfaces:

- ***Interface B-6 (the CMS R&A to State): Provider Registration Data***
  All EPs and EHs applying for incentives must first register with the CMS R&A. With minor variations based on provider type, the CMS R&A captures basic information such as demographics, payee information, and program selection (Medicare, Medicaid, or both). It checks for valid National Provider Identifier (NPI), hospital CMS Certification Number (CCN), Tax Identification Number (TIN), and any sanctions. Professionals opting to attest with Medicaid and hospitals opting to attest with Medicaid or claiming dual Medicaid/Medicare eligibility are passed to the state as part of a daily registration batch B-6 interface if they have no federal sanctions.
  During the registration process, CMS supplies the professional or hospital with a URL to their state's attestation website which will permit continuation of the registration and attestation process. Providers are instructed to check the website after 24 hours, providing time for the CMS R&A to communicate to the state and for the state to begin processing the registration.
- ***Interface B-7 (State to the CMS R&A): Registration Confirmation D***ata
  After a B-6 is processed and the provider enters registration data, patient volume data, and MU data (when applicable), eligibility response is returned from the state to the CMS R&A. If the provider is not found in the state's registry of professionals and hospitals, or if any other verification fails, the CMS R&A

is notified that the provider is not eligible. Eligibility responses are communicated to the CMS R&A in daily registration B-7 response batches.

- ***Interface C-5 (CMS R&A to State): Dually EH Attestation Data***
  For EHs who choose to participate in both the Medicare and Medicaid EHR Incentive Programs (those who are "dually eligible"), CMS sends Medicare attestation data to the states from the CMS R&A.
- ***Interface D-16 (State to CMS' R&A): Duplicate Payment Exclusion Check***
  To avoid duplicate payments and making payments to federally sanctioned professionals and hospitals, NC-MIPS notifies the CMS R&A when it intends to make a payment. These notifications are performed in accordance with specifications in the CMS Interface Control document. NC-MIPS waits for a response from the CMS R&A before making a payment. The state assumes that the CMS R&A will lock the specific provider records before sending the response back to the state, and that the lock will remain in effect until the state notifies the CMS R&A that payment has been issued.
- ***Interface D-17 (State to the CMS R&A): Dually EH Cost Report Data***
  For EHs who choose to participate in both the Medicare and Medicaid EHR Incentive Programs, DMA's Finance division currently supplies hospital cost report data for use in NC-MIPS. In the future, it is expected that CMS will send hospital cost report data to the states from the CMS R&A.
- ***Interface D-18 (State to CMS R&A): Incentive Payment Data***
  NC-MIPS transmits payment details to the CMS R&A as specified in the CMS Interface Control Document after a payment has been made. To support the interfaces, NC configured Windows Service to invoke a FTPS client (curl) to connect to the CMS Gentran server farm to send and retrieve the appropriate files on a daily basis during a configurable window. A combination of certificates and username/password credentials ensures the connection is appropriately made with the FTPS protocol, and ensures the data is transported securely. If the file has not been found at CMS or is unable to be sent to CMS by a configurable number of minutes after the end of the scheduled window, an exception is raised to operations to conduct follow up.
- ***E-7 [New interface]: Audit data***
  E-7-Request and E-7-Response Data Interfaces between the CMS' R&A and states enable them to exchange audit information, so that each audit will not need to be entered manually. Upon receiving and processing audit information from the state, the CMS R&A will send notification information back to the state via E-7-Response Interface.
- ***E-8 [New interface]: Appeals data***
  E-8-Request and E-8-Response Data Interfaces between the CMS R&A and states enable them to exchange appeal information, so that each appeal will not need to be entered manually. Upon receiving and processing appeal information from the state, the CMS R&A will send notification information back to the state via E-8-Response Interface. E-8-Response transmission contains confirmation information with unique transaction number, identifying information with the NPI/TIN for EPs or CCN for the Hospitals and the CMS R&A-generated appeal case number.

Upon receipt of a file, North Carolina:

- Uses material specified in the CMS Interface Control document to determine how the file should be processed;
- Validates the file retrieved against the XML schema provided in the CMS Interface Control document;
- Performs a series of additional validations to ensure the file integrity (e.g., verify transaction count, that files are not being processed out of order, etc.); and,
- Individually processes the transactions.

In March 2011, as one of the initial testing partners with CMS, North Carolina successfully tested connectivity and the ability to send and retrieve files using the methodology described above.

C.4.3 NC-MIPS, MMIS, and Other Systems

The business processes associated with the NC Medicaid EHR Incentive Program are largely distinct from other Medicaid business processes, and NC-MIPS is a standalone system that manages EHR Incentive Program attestation and validation. However, NC-MIPS interfaces with the state MMIS and supporting systems to process incentive payments and gather provider information relevant to program eligibility.

North Carolina is currently in the process of implementing a Replacement MMIS, called NC Tracks, and the new supporting systems went live in July 2013. While NC-MIPS currently interfaces with the Legacy MMIS and related systems, it was built for later compatibility with NC Tracks.

Provider Information: Enrollment, Verification, & Credentialing (EVC) System and DRIVE

A web service call between NC-MIPS and the NC EVC System currently pulls the following information into NC-MIPS for provider eligibility determination: name, address, NPI, TIN, provider type and specialty. In April 2009, EVC began capturing owners, officers, and managing employees of healthcare groups in addition to Medicaid providers; this information is referenced manually by staff during pre-payment attestation validation. NC-MIPS Help Desk call and email interactions are also currently stored and tracked in EVC. In 2013, NC-MIPS will build a web service interface to the new provider enrollment validation management system, called Build 5, and reference the system as needed for future provider eligibility determination.

NC-MIPS currently utilizes the existing Medicaid claims data warehouse, called DRIVE, to validate the Medicaid patient volume requirement for both EPs and EHs. Where there is a discrepancy between provider-supplied and claims data warehouse data, state staff research unexplained differences and perform provider outreach to determine eligibility. As eligibility determinations are made, snapshots of relevant summary claims data are maintained in NC-MIPS for audit purposes. In 2014, NC-MIPS will begin to utilize a new reporting & analytics claims data warehouse for this purpose.

Payment: MMIS

NC-MIPS currently delivers incentive payments through the Legacy MMIS in the same mode as other Medicaid financial processing, via secure file transfer process on the check-write cycle for claims. This cycle distributes payments every one to two weeks. The MMIS includes these payments in their financial documentation (e.g., 1099 reporting) and responds with a weekly payment file to NC-MIPS. In 2013, NC-MIPS will be modified to accommodate an interface to NC Tracks for incentive payment processing.

C.5 Attestation and Payment

Providers must attest that all the data supplied to the state is accurate prior to payment. The attestation finalizes the verifications described in *Section C.3: NC Medicaid EHR Incentive Program Business Requirements* to ensure compliance with CMS' Final Rule conditions for receiving incentive payments. The steps required to complete the incentive payment process include:

- Attestation;
- Calculating the payment amount;
- Coordinating with the CMS R&A, as described in *Section C.4.2: Interface with CMS' Registration & Attestation System;* and,
- Following state payment processes.

C.5.1 Attestation

After provider data has been collected, providers attest to the veracity of the information provided and their qualification according to program rules. They then submit the data and attestation electronically and mail or fax in a signed copy for verification. In 2015, DMA expects to upload the e-signature function in NC-MIPS to improve the efficiencies of the Program for providers and the state. The attestation page of the portal includes the CMS-provided language directly above the provider's signature:

> *"This is to certify that the foregoing information is true, accurate, and complete. I understand that Medicaid EHR incentive payments submitted under this provider number will be from Federal funds, and that any falsification, or concealment of a material fact may be prosecuted under Federal and State laws."*

The attestation process also requires EPs and EHs to acknowledge this warning of the potential for prosecution:

> *"Concealment or falsification of material facts regarding incentive payments can result in Medicaid Provider Payment suspension, civil prosecution pursuant to the False Claims Act (31 USC 3729-3733), Medical Assistance Provider Fraud (N.C.G.S. 108A-63), Medical Assistance Provider False Claims Act (N.C.G.S. 108A-70.10 to 70-16), the North Carolina False Claims Act (N.C.G.S. 1-605 to 1-618), and/or criminal prosecution pursuant to criminal fraud statutes of North Carolina."*

On the electronic submission page during a MU attestation, providers must acknowledge that the following statements are true to their knowledge:

- *"The information submitted for CQMs was generated as output from an identified EHR technology.*
- *The information submitted is accurate to the knowledge and belief of the EP.*
- *The information submitted is accurate and complete for numerators, denominators, and exclusions for measures that are applicable to the EP.*
- *The information submitted included information on all patient to whom the measure applies.*
- *A zero was reported in the denominator of a measure when an EP did not care for any patient in the denominator population during the EHR reporting period.*
- *As a meaningful EHR user, at least 50 percent of my patient encounters during the MU reporting period occurred at practice locations equipped with CEHRT and these practices were listed in the attestation information.*
- *If applicable, I reported three Core CQMs, and three Alternate CQMs and three Additional CQMs all with zero denominators and all of the 35 remaining CQMs calculated by my CEHRT have a value of zero in the denominator."*

Finally, they must acknowledge the following statement:

> *"I understand that I must have, and retain, for six years after the last incentive payment is received, documentation to support my eligibility for incentive payments and that the Division of Medical Assistance (DMA) may ask for this documentation. I further understand that DMA will pursue repayment in all instances of improper or duplicate payments. I certify that I am not receiving Medicaid EHR incentive funds from any other state or commonwealth and have no received a payment from DMA for this year."*

C.5.2 Payment Calculation for Eligible Professionals

Once an EP is deemed eligible to receive an incentive payment, that EP or their designated payee is paid in accordance with the amounts and schedule set forth by CMS. CMS has stipulated standard incentive payment

amounts and a schedule for their distribution for all EPs participating in the Medicaid EHR Incentive Program based on a model of sharing the cost of implementing CEHRT.

The maximum total incentive available for an EP over six years of participation in the program is $63,750. The maximum total incentive available for a pediatrician qualifying under the special 20 percent Medicaid patient volume rule for all participation years is $42,500. Pediatricians who dip in and out of the 30 percent Medicaid patient volume threshold may receive anywhere from $42,500 to $63,750 over the course of their participation in the program.

Payment Year	EP qualifying under 30 percent Medicaid patient volume	Pediatrician qualifying under 20 percent Medicaid patient volume rule (all six years)
Year 1	$21,250	$14, 167
Year 2	$8,500	$5,667
Year 3	$8,500	$5,667
Year 4	$8,500	$5,667
Year 5	$8,500	$5,667
Year 6	$8,500	$5,667
Total Incentive Payment Amount	**$63,750**	**$42,500**

Table 32 - Payment Schedule for EPs

Medicaid providers are not required to participate on a consecutive, annual basis; however, the last year an EP may begin participating is 2016, with the program ending in 2021. Unlike Medicare, the NC Medicaid EHR Incentive Program does not include a future reimbursement rate reduction for claims submitted by non-participating Medicaid providers.

C.5.3 Payment Calculation for Eligible Hospitals

Pursuant to the Final Rule 75 FR 44314, payment to EHs are based on discharges using the average annual growth rate for an individual hospital over the most recent three years of available data from an auditable data source. As a standard, North Carolina has adopted the use of four consecutive periods of full 12-month Medicaid cost report data under a single CCN to calculate an average annual growth rate over three years. Attestation of cost report data must correspond to the Medicare CCN number registered with CMS for the EH submitting the attestation.

Definitions:

- First Payment Year: 75 FR 44314 defines an EHs First Payment Year as the first federal fiscal year they successfully demonstrate that they adopted, implemented, or upgraded CEHRT or were a meaningful user of CEHRT for the EHR reporting period for the payment year. EHs must review their number of consecutive 12-month Medicaid cost reporting periods under a single CCN in accordance with provisions below to determine their eligible First Payment Year under the standard payment calculation (see Section C.5.3.1 Standard Payment Calculation) or alternate payment calculation (see Section C.5.3.2 Alternate Payment Calculation).

- Base Year: North Carolina defines an EH's Base Year as the "EHR reporting period for the first payment year." The Base Year represents the most recent continuous 12-month period coinciding with the hospital's latest filed 12-month Medicaid cost report that is available prior to the EH's First Payment Year.
    - Example: FFY12 begins on October 1, 2011 and ends on September 30, 2012. EHs whose First Payment Year is FFY12, with 12-month cost reporting periods ending on or before September 30, 2011, must use their FY11 (or latest filed) cost report as their Base Year. EHs with 12-month cost reporting periods ending on or after October 1, 2011 must use their FY10 (or latest filed) Medicaid cost report as their Base Year. Once a Base Year is determined, it does not change under standard payment calculation (see *Section C.5.3.1: Standard Payment Calculation*) or alternate payment calculation (see *Section C.5.3.2: Alternate Payment Calculation*.)
- Tail Period: For 2011, the NC Medicaid EHR Incentive Program matched Medicare's 60-day tail period. In 2012, we extended the tail period to 120 days to account for a delay in launch of MIPS 2.0 and MU attestation. Going forward for 2013 and beyond, we propose a 120-day tail period for consistency. The 120-day tail period will also allow providers more time to attest for 365 days of MU, as they will only be able to attest during the tail period for a 365-day MU payment.
    - Example: 2012 attestations may be submitted 120 days beyond the end of FY11, resulting in a deadline of January 28, 2013. This extension means that a November 15, 2012 attestation date will result in a 2012 Base Year. Thus, hospitals who are eligible for 2012 to be their First Payment Year and who submit their EHR attestation between October 1, 2012 and January 28 2013 are considered to have attested within the Federal Fiscal Year 2012. Consequently, EHs who are eligible for 2012 to be their First Payment Year and who submit their EHR attestation after January 28, 2013 are considered to have attested within the Federal Fiscal Year 2013, resulting in a 2013 Base Year.

The following steps are used to determine the NC Medicaid EHR Incentive Payment for EHs with four or more consecutive 12-month cost reporting periods under a single CCN. If a provider has less than four consecutive 12-month cost reporting periods under a single CCN or has had a new enrollment, change of ownership (CHOW), merger, or divestiture of acute care inpatient beds, refer to *Section C.5.3.2: Alternate Payment Calculation* for the EH payment calculation.

C.5.3.1 Standard Payment Calculation

Step 1: Determine the Average Annual Growth Rate for the last three years

The average annual growth will be computed by averaging the annual percentage change in total patient discharges over the most recent three years of available data from 12-month hospital cost reports (MCRIF32) prior to the most current fiscal year. This information will be obtained from Total Patient discharge amounts in worksheet S-3, Part I, Line 12, Col 15 for the applicable FYs at the time of the calculation.

Example:

Total Patient discharges in worksheet S-3, Part I, Line 12, Col 15 for FY 2010, 2009, 2008, 2007 are shown in the chart below.

DGY3, DGY2, DGY1 will represent Discharge Growth 3 years ago, 2 years ago, and prior year respectively.
DGY3 = (Total Discharges FY08 – Total Discharges FY07)/Total Discharges FY07
DGY2 = (Total Discharges FY09 – Total Discharges FY08)/Total Discharges FY08

DGY1 = (Total Discharges FY10 – Total Discharges FY09)/Total Discharges FY09
Average Annual Growth rate = (DGY3+DGY2+DGY1) / 3

Total Discharges	FYB	FYE	W/S S-3, Part I, Line 12, Col 15	Prior Year	Current Year	Increase / (Decrease)	Growth Rate
3rd Prior Year	10/1/2006	9/30/2007	7,246				
2nd Prior Year	10/1/2007	9/30/2008	6,657	7,246	6,657	(589)	-8.1286%
1st Prior Year	10/1/2008	9/30/2009	5,720	6,657	5,720	(937)	-14.0754%
Current	10/1/2009	9/30/2010	5,456	5,720	5,456	(264)	-4.6154%
				Total Increase / (Decrease)			-26.8194%
				Average 3 Year Growth Rate			**-8.9398%**

Table 33 - Hospital Calculation Growth Rate Example

In this example, when FY 2011 data becomes available, FY 2007 data would not be used and FY 2011, 2010, 2009, and 2008 cost report data would be used.

Note that if the average annual growth rate is negative over the three-year period, it is applied as such.

Step 2a: Determine Projected Total Discharges

North Carolina will utilize the most recent year 12-month period hospital cost report data from MCRIF32 and the Annual Average Growth Rate from Step 1 to project Total Discharges for Year 2, Year 3, and Year 4. Projected Discharge figures will be rounded to the nearest whole number.

Current Year – The Data Source is worksheet S-3 Part 1, Line 12, Col. 15
Example: 5,456 Current Year Total Discharges

Year 2 Projected = [Number of discharges in Current Year * (1 + Average Annual Growth Rate)]
Example: [5,456 * (1 + (-0.089398)] = 4,968

Year 3 Projected = [Year 2 Projected * (1 + Average Annual Growth Rate)]
Example: [4,968 *(1 + (-0.089398)] = 4,524

Year 4 Projected = Year 3 Projected * (1+ Average Annual Growth Rate)
Example: [4,524 * (1 + (-0.089398)] = 4,120

Step 2b: Calculating the Total Discharge Related Amount

The Overall EHR Amount includes a discharge related amount of an additional $200 per projected discharges between 1,150 and 23,000 discharges. No amount is calculated for discharges prior to the 1,150th discharge or for discharges after the 23,000th discharge.

The following formula will be utilized to calculate the discharge related amount for years 1 through 4:

Discharge related amount for Year 1 = (Current Year Projected Discharges under 23,000 – 1149) * $200
Discharge related amount for Year 2 = (Year 2 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 3 = (Year 3 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 4 = (Year 4 projected discharges under 23,000 – 1149) * $200

Year	Per Discharge Amount	Projected Total Discharges	Disallowed Discharges	Allowable Discharges	Amount
Year 1	$200	5,456	1,149	4,307	$861,400
Year 2	$200	4,968	1,149	3,819	$763,800
Year 3	$200	4,524	1,149	3,375	$675,000
Year 4	$200	4,120	1,149	2,971	$594,200
Total Discharge Related Amount					**$2,894,400**

Table 34 - Hospital Calculation Total Discharge Amount Example

Step 3: Calculate the Initial EHR Amount for 4 Years

The Initial Amount is equal to a base amount of $2,000,000 + the Total Discharge related amount for each year.

Calculate Initial Amount	Year 1	Year 2	Year 3	Year 4
Base Amount	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Discharge Related Amount	$861,400	$763,800	$675,000	$594,200
Aggregate EHR Amount	$2,861,400	$2,763,800	$2,675,000	$2,594,200

Table 35 - Hospital Calculation Aggregate EHR Amount Example

Step 4: Apply the Medicaid Transition Factor for Each of the 4 Years

Transition Factor Year 1 = 1.00
Transition Factor Year 2 = 0.75
Transition Factor Year 3 = 0.50
Transition Factor Year 4 = 0.25

	Year 1	Year 2	Year 3	Year 4
Aggregate EHR	$ 2,861,400	$ 2,763,800	$ 2,675,000	$ 2,594,200
Transition Factor	1.00	0.75	0.50	0.25
Applied Amount	$ 2,861,400	$ 2,072,850	$ 1,337,500	$ 648,550

Table 36 - Hospital Calculation Medicaid Transition Factor Example

Step 5: Calculate the Overall EHR Amount for 4 Years

Add the Aggregate EHR Amount for all four years after application of the Transition Factor.

Payment Year	Payment Amount
Year 1	$ 2,861,400

Payment Year	Payment Amount
Year 2	$ 2,072,850
Year 3	$ 1,337,500
Year 4	$ 648,550
Total	**$ 6,920,300**

Table 37 - Hospital Calculation Overall EHR Amount Example

Step 6: Calculate the Medicaid Share of the Overall EHR Amount for 4 Years

The Medicaid share shall be calculated using the most current 12-month period from the hospital cost report data on MCRIF32.

The Medicaid share will be calculated as the numerator (M + N) divided by the denominator (P times the product of Q minus R divided by Q)

– Numerator = **M + N**

M = Number of paid Medicaid inpatient-bed days; if the qualifying cost report is in the CMS 2552-96 version, the source for this data element is worksheet S-3, Part I, Col 5, Line 1 plus Lines 6 through 10 of most recent fiscal year cost report. If the qualifying cost report is in the CMS 2552-10 version for 12-month cost report periods beginning on or after May 1, 2010, the source for paid Medicaid inpatient bed-days will be Worksheet S-3, Part I, Col 7, Line 1 plus Lines 8 through 12.

N = Number of paid inpatient-bed-days of Medicaid individuals enrolled in a managed care organization, a pre-paid inpatient health plan, or a pre-paid ambulatory health plan; if the qualifying cost report is in the CMS 2552-96 version, the source for this data element is worksheet S-3, Part I, Col 5, Line 2 of most recent fiscal year cost report. If the qualifying cost report is in the CMS 2552-10 version for 12-month cost report periods beginning on or after May 1, 2010, the source for paid Medicaid HMO inpatient bed days will be Worksheet S-3, Part I, Col 7, Line 2. If the cost report sources identified in this paragraph for paid HMO inpatient days contain days other than paid Medicaid HMO inpatient bed days, the provider must extract only those days which are paid Medicaid HMO inpatient bed days or paid Out of State Medicaid inpatient bed days.

– Denominator = **P *((Q – R) / Q)**

P = Total amount of EHs' inpatient bed days over selected period; if the qualifying cost report is the CMS 2552-96 version, the source is worksheet S-3, Part I, Col 6, Line 1, plus Line 2 plus Lines 6 through 10 of most recent fiscal year cost report. If the qualifying cost report is the CMS 2552-10 version for 12-month cost report periods beginning on or after May 1, 2010, the source for total inpatient bed days will be Worksheet S-3, Part I, Col 8, Line 1 plus Line 2 plus Lines 8 through 12.

Q = Total amount of EH's charges; if the qualifying cost report is the CMS 2552-96 version, the source is worksheet C, Part I, Line 101, Col. 8 of most recent fiscal year cost report. If the qualifying cost report is the CMS 2552-10 version for 12-month cost report periods beginning on or after May 1, 2010, the source for total eligible charges will be Worksheet C, Part I, Line 200, Col 8.

R = Charges attributable to charity care; if the qualifying cost report is the CMS 2552-96 version, the source is the EH Attestation. If the qualifying cost report is the CMS 2552-10 version for 12-month cost report periods beginning on or after May 1, 2010, the source will be Worksheet S-10, Column 3, Line 20.

M	Total Paid Medicaid Inpatient Bed Days	2,749
N	Total Paid Medicaid Managed Care Inpatient Bed Days	0
Numerator (M+N)	Total Paid Medicaid and Managed Care Inpatient Days	2,749
Q	Total Hospital Charges	232,903,632
R	Total Charity Care / Uncompensated Care Charges	4,767,979
Q minus R	Total Hospital Charges Less Charity Care Charges	228,135,653
Q-R/Q	Non - Charity Care Percentage	0.979528104
P	Total Hospital Inpatient Bed Days	22,621
Denominator	Total Non-Charity Hospital Inpatient Bed Days	22,158
Medicaid Share		**0.124064074**

Table 38 - Hospital Calculation Medicaid Share Example

Step 7: Calculate the Medicaid Aggregate EHR Incentive Payment Amount

Aggregate EHR payment = Medicaid Share (Step 6) * Overall EHR Amount (Step 5)

Overall EHR Amount for 4 Years	$ 6,920,300
Medicaid Share	0.124064074
Medicaid Aggregate EHR Incentive Payment Amount (to be paid over a 3 year period)	**$ 858,560.61**

Table 39 - Hospital Calculation Aggregate Share Example

Step 8: Calculate the Annual EHR Incentive Payment Amount

Payments will be made over a three-year period for the Overall EHR amount with Year 1 payment at 50 percent, Year 2 payment at 40 percent, and Year 3 payment at 10 percent.

Payment Year	Percentage	Payment
Year 1 Payment	50%	$ 429,280.31
Year 2 Payment	40%	$ 343,424.24
Year 3 Payment	10%	$ 85,856.06
Year 4 Payment	0%	$ 0

Payment Year	Percentage	Payment
Total		**$ 858,561.61**

Table 40 - Hospital Calculation Annual EHR Incentive Payment Example

C.5.3.2 Alternate Payment Calculation

Below is the payment calculation for EHs with less than four consecutive 12-month cost reporting periods under a single CCN (new provider, CHOW, merger, or divestiture of acute care inpatient beds).

EHs with less than four consecutive 12-month cost reporting periods under a single CCN must have a minimum of two consecutive 12-month cost reporting periods under a single CCN, subject to the provisions in this section regarding new providers, CHOWs, mergers, and divestitures before they can attest for a first payment year. The minimum two consecutive 12-month cost reporting periods under a single CCN must be full cost reporting periods which occur after the cost reporting year in which the new enrollment, CHOW, merger, or divestiture occurred. For example, an EH has a September 30th year-end cost report period but changed ownership July 1, 2008. The new owner must use the two cost reporting periods of October 1, 2008 – September 30, 2009 and October 1, 2009 - September 30, 2010 as the minimum consecutive full 12-month cost reporting periods. Assuming the EH met all other eligibility requirements, they could attest in 2011 for their First Payment Year and use their FY10 cost report as the Base Year. The cost reporting period ended September 30, 2008 (and earlier) may not be included in the alternate payment calculation.

The First Payment Year calculation will be made using the EH's Base Year cost report data and an Average Annual Growth Rate calculated from the (minimum) two consecutive full 12-month cost reporting periods. The Second Payment Year calculation will use the third consecutive full 12-month cost report discharge data to revise the Average Annual Growth Rate. Base Year data shall remain unchanged. Any change in the Aggregate Medicaid EHR Incentive Payment Amount calculation based on the revised Average Annual Growth Rate will be adjusted in the Second Payment Year amount.

First Payment Year and the EH's corresponding Base Year are defined in *Section C.5.3 Payment Calculation for EHs*.

If a hospital is eligible for 2011 as their First Payment Year under the Alternate Payment Calculation, then the tail period defined in *Section C.5.3: Payment Calculation for EHs* applies if the hospital attested between October 1, 2011 and January 28, 2012.

Attestation of cost report data must correspond to the Medicare CCN number registered with CMS for the EH submitting the attestation.

New hospital providers with less than four consecutive 12-month cost reporting periods under their new CCN shall have the EH payment calculation in accordance with *Section C.5.3.2: Alternate Payment Calculation*.

CHOWs shall be defined by 42 C.F.R §489.18.

If a hospital provider has a CHOW which does not result in a change of CCN, and the hospital has four or more consecutive full 12-month cost report periods, the provider shall have the EH payment calculation in accordance with *Section C.5.3: Payment Calculation for EHs*, notwithstanding the provisions below for hospitals with mergers and divestitures.

Hospitals who have a CHOW resulting in a change of CCN shall follow the EH payment calculation in accordance with *Section C.5.3.2: Alternate Payment Calculation*.

Mergers are identified in 42 CFR 489.18 and may not result in the change of CCN for the provider absorbing the merged hospital acute care inpatient beds; however, such a merger of acute care inpatient beds will disproportionately skew the calculation of the Average Annual Growth Rate in the year of merger and the subsequent cost report period. Hospitals that have absorbed a merged hospital and have not had a change in CCN shall have the EH payment calculation in accordance with *Section C.5.3.2: Alternate Payment Calculation*.

For purposes of this document, divestitures are deemed to be hospitals which have divested of one or more licensed acute care beds from their CCN without a change of CCN; this reduction of beds is shown in the hospital's license from Division of Health Service Regulation. Such a divestiture will disproportionately skew the calculation of the Average Annual Growth Rate in the year of divestiture and the subsequent cost report period. Hospitals that have divested of acute care inpatient beds and have not had a change in CCN shall have the EH payment calculation in accordance with *Section C.5.3.2: Alternate Payment Calculation*.

The following steps for Year 1 and Year 2 will be used to determine the North Carolina Medicaid EHR Incentive Payment for EHs that have less than four consecutive full 12-month cost report periods under a single CCN.

Alternate Payment Calculation - Year 1

Step 1 (Year 1): Determine the Estimated Average Annual Growth Rate

The estimated Average Annual Growth Rate will be computed by averaging the annual percentage change in total patient discharges from the most recent two years of available data from the 12-month hospital cost reports (MCRIF32) prior to the First Payment Year. The two full 12-month cost report periods necessary to perform this calculation must be the two full 12-month cost report periods subsequent to the new enrollment, CHOW, merger or divestiture as described above. The 12-month cost report period in which the new enrollment, CHOW, merger, or divestiture occurred may not be used. This information will be obtained from Total Patient discharge amounts in worksheet S-3, Part I, Line 12, Col 15 for the applicable FYs at the time of the calculation.

Example:

Total Patient discharges in worksheet S-3, Part I, Line 12, Col 15 for FY 2011, 2010 are shown in the chart below.

DGY3, DGY2, DGY1 will represent Discharge Growth 3 years ago, 2 years ago, and prior year respectively.
DGY3 = N/A
DGY2 = N/A
DGY1 = (Total Discharges FY11-Total Discharges FY10)/Total Discharges FY10
Average Annual Growth Rate = (DGY1)

Total Discharges	FYB	FYE	W/S S-3, Part I, Line 12, Col 15	Prior Year	Current Year	Increase / (Decrease)	Growth Rate
3rd Prior Year	N/A	N/A	N/A				
2nd Prior Year	N/A	N/A	N/A	N/A	N/A	N/A)	N/A
1st Prior Year	10/1/2009	9/30/2010	8,230	N/A	N/A	N/A	N/A
Base Year	10/1/2010	9/30/2011	8,179	8,230	8,179	(51)	-0.6197%
				Total Increase / (Decrease)			-0.6197%

Total Discharges	FYB	FYE	W/S S-3, Part I, Line 12, Col 15	Prior Year	Current Year	Increase / (Decrease)	Growth Rate
				Average Annual Growth Rate			-0.6197%

Table 41 - Alternate Hospital Calculation Growth Rate Example

(In this example, when FY 2012 data becomes available, FY 2012, 2011, and 2010 cost report data would be used to recalculate the Growth Rate).

Note that if the Average Annual Growth Rate is negative over the three year period, it is applied as such.

Step 2a (Year 1): Determine Projected Total Discharges

North Carolina will utilize the Base Year 12-month period hospital cost report data from MCRIF32 and the Annual Average Growth Rate from Step 1 to project Total Discharges for Year 2, Year 3, and Year 4. Projected Discharge figures will be rounded to the nearest whole number.

Current Year – The Data Source is worksheet S-3 Part 1, Line 12, Col. 15
Example: 8,179 Base Year Total Discharges

Year 2 Projected = [Number of discharges in Current Year * (1 + Average Annual Growth Rate)]
Example: [8,179 * (1 + (-0.06197)] = 8,128

Year 3 Projected = [Year 2 Projected * (1 + Average Annual Growth Rate)]
Example: [8,128 *(1 + (-0.06197)] = 8,078

Year 4 Projected = Year 3 Projected * (1+ Average Annual Growth Rate)
Example: [8,078 * (1 + (-0.06197)] = 8,028

Step 2b (Year 1): Calculating the Total Discharge Related Amount

The Overall EHR Amount includes a discharge related amount of an additional $200 per projected discharges between 1,150 and 23,000 discharges. No amount is calculated for discharges prior to the 1,150th discharge or for discharges after the 23,000th discharge.

The following formula will be utilized to calculate the discharge related amount for years 1 through 4.

Discharge related amount for Year 1 = (Current Year Projected Discharges under 23,000 – 1149) * $200
Discharge related amount for Year 2 = (Year 2 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 3 = (Year 3 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 4 = (Year 4 projected discharges under 23,000 – 1149) * $200

	Per Discharge Amount	Projected Total Discharges	Disallowed Discharges	Allowable Discharges	Amount
Year 1	$200	8,179	1,149	7,030	$1,406,000
Year 2	$200	8,128	1,149	6,979	$1,395,800

	Per Discharge Amount	Projected Total Discharges	Disallowed Discharges	Allowable Discharges	Amount
Year 3	$200	8,078	1,149	6,929	$1,385,800
Year 4	$200	8,028	1,149	6,879	$1,375,800
Total Discharge Related Amount					**$5,563,400**

Table 42 - Alternate Hospital Calculation Total Discharge Amount Example

Step 3 (Year 1): Calculate the Initial EHR Amount for Four Years

The Initial Amount is = a base amount of $2,000,000 + the total discharge related amount for each year.

Calculate Initial Amount	Year 1	Year 2	Year 3	Year 4
Base Amount	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Discharge Related Amount	$1,406,000	$1,395,800	$1,385,800	$1,375,800
Aggregate EHR Amount	**$3,406,000**	**$3,395,800**	**$3,385,800**	**$3,375,800**

Table 43 - Alternate Hospital Calculation Aggregate EHR Amount Example

Step 4 (Year 1): Apply the Medicaid Transition Factor for Each of the Four Years

Transition Factor Year 1 = 1.00
Transition Factor Year 2 = 0.75
Transition Factor Year 3 = 0.50
Transition Factor Year 4 = 0.25

	Year 1	Year 2	Year 3	Year 4
Aggregate EHR	$3,406,000	$3,395,800	$3,385,800	$3,375,800
Transition Factor	1.00	0.75	0.50	0.25
Applied Amount	**$3,406,000**	**$2,546,850**	**$1,692,900**	**$843,950**

Table 44 - Alternate Hospital Calculation Medicaid Transition Factor Example

Step 5 (Year 1): Calculate the Overall EHR Amount for Four Years

Add the Aggregate EHR Amount for all four years after application of the Transition Factor.

Payment Year	Payment Amount
Year 1	$ 3,406,400
Year 2	$ 2,546,850
Year 3	$ 1,692,900
Year 4	$ 843,950

Payment Year	Payment Amount
Total	**$ 8,489,700**

Table 45 - Alternate Hospital Calculation Overall EHR Amount Example

Step 6 (Year 1): Calculate the Medicaid Share of the Overall EHR Amount for Four Years

The Medicaid share shall be calculated using the Base Year 12-month period from the hospital cost report data on MCRIF32.

The Medicaid inpatient bed-days data extracted from the specified data fields of the Medicaid Cost Report should not be all inclusive of the data in those individual cost report fields. To preserve the integrity of the data used in calculating the Medicaid Share, only the inpatient bed-days data specific to the defined criteria of the numerator and the denominator should be extracted from the appropriate Medicaid Cost Report data fields.

The Medicaid share will be calculated as the numerator (M + N) divided by the denominator (P times the product of Q minus R divided by Q)

− Numerator = **M + N**

M = Number of inpatient-bed days paid by Medicaid for individuals enrolled in Medicaid; Source is worksheet S-3,Part I, Col 5, Line 1 plus Lines 6 through 10 of the Base Year cost report.

The source of Medicaid inpatient bed days will change in the new CMS 2552-10 cost report effective for 12-month cost report periods beginning on or after May 1, 2010.

In the CMS 2552-10, the source for Medicaid inpatient bed-days will be Worksheet S- 3, Part I, Col 7, Line 1 plus Lines 8 through 12.

N = Number of paid inpatient-bed-days of Medicaid individuals enrolled in a managed care organization, a pre-paid inpatient health plan, or a pre-paid ambulatory health plan; and out-of-state days paid by Medicaid. The source is worksheet S-3, Part I, Col 5, Line 2 of the Base Year cost report.

The Source of Medicaid inpatient bed-days enrolled in a HMO will change in the new CMS 2552-10 cost report effective for 12-month cost report periods beginning on or after May 1, 2010. In the CMS 2552-10, the source for Medicaid HMO inpatient bed days will be Worksheet S-3, Part I, Col 7, Line 2.

− Denominator = **P *((Q – R) / Q)**

P = Total amount of EHs' inpatient bed days over selected period;

Source is worksheet S-3, Part I, Col 6, Line 1, plus Line 2 plus Lines 6 through 10 of the Base Year cost report.

The Source for total inpatient bed-days will change in the new CMS 2552-10 cost report effective for 12-month cost report periods beginning on or after May 1, 2010. In the CMS 2552-10, the source for total inpatient bed days will be Worksheet S-3, Part I, Col 8, Line 1 plus Line 2 plus Lines 8 through 12.

Q = Total amount of EH's charges; Source is worksheet C, Part I, Line 101, Col. 8 of the Base Year cost report.

The Source for total amount of eligible charges will change in the new CMS 2552-10 cost report effective for 12-month cost report periods beginning on or after May 1,

2010. In the CMS 2552-10, the source for total eligible charges will be Worksheet C,

Part I, Line 200, Col 8.

R = Charges attributable to charity care; Source is EH Attestation.

The Source of charges attributable to charity care will change in the new CMS 2552-10 cost report effective for 12-month cost report periods beginning on or after May 1, 2010. In the CMS 2552-10, the source will be Worksheet S-10, Column 3, Line 20.

M	Total Medicaid Inpatient Bed Days	3,943
N	Total Medicaid Managed Care Inpatient Bed Days	217
Numerator (M+N)	Total Medicaid and Managed Care Inpatient Days	4,160
Q	Total Hospital Charges	421,467,997
R	Total Charity Care / Uncompensated Care Charges	10,000,000
Q minus R	Total Hospital Charges Less Charity Care Charges	411,467,997
Q-R/Q	Non - Charity Care Percentage	0.976273406
P	Total Hospital Inpatient Bed Days	34,433
Denominator	Total Non-Charity Hospital Inpatient Bed Days	33,616
Medicaid Share		**0.123750513**

Table 46 - Alternate Hospital Calculation Medicaid Share Example

Step 7 (Year 1): Calculate the Medicaid Aggregate EHR Incentive Payment Amount

Aggregate EHR payment = Medicaid Share (Step 6) * Overall EHR Amount (Step 5)

Overall EHR Amount for 4 Years	$8,489,700
Medicaid Share	0.123750513
Medicaid Aggregate EHR Incentive Payment Amount	**$1,050,605**

Table 47 - Alternate Hospital Calculation Aggregate Share Example

Step 8 (Year 1): Calculate the Annual EHR Incentive Payment Amount

Payments will be made over a three-year period for the Overall EHR amount with Year 1 payment at 50 percent, Year 2 payment at 40 percent, and Year 3 payment at 10 percent.

Payment Year	Percentage	Payment
Year 1 Payment	50%	$525,302
Year 2 Payment	40%	$420,242
Year 3 Payment	10%	$105,061

Payment Year	Percentage	Payment
Year 4 Payment	0%	$ 0
Total		**$1,050,605**

Table 48 - Alternate Hospital Calculation Annual EHR Incentive Payment Example

NOTE: Year 2 and Year 3 payments will be recalculated when the third 12-month cost report is filed and will be adjusted accordingly to insure that the total EHR Incentive Payments to be made are calculated using actual cost report data as filed for three consecutive 12-month cost reporting periods.

REVISED CALCULATION – YEAR 2

Step 1 (Year 2): Recalculate the Estimated Average Annual Growth Rate

The estimated average annual growth will be recalculated by averaging the annual percentage change in total patient discharges from the most recent three years of available data from the 12-month hospital cost reports (MCRIF32) prior to the year subsequent to the First Payment Year. The three full 12-month cost report periods necessary to perform this calculation must be the three full 12-month cost report periods subsequent to the new enrollment, CHOW, merger or divestiture as described above. The 12-month cost report period in which the new enrollment, CHOW, merger, or divestiture occurred may not be used. This information will be obtained from Total Patient discharge amounts in worksheet S-3, Part I, Line 12, Col 15 for the applicable FYs at the time of the calculation.

Example:

Total Patient discharges in worksheet S-3, Part I, Line 12, Col 15 for FY 2011, 2010 are shown in the chart below.

DGY3, DGY2, DGY1 will represent Discharge Growth 3 years ago, 2 years ago, and prior year respectively.
DGY3 = N/A
DGY2 = (Total Discharges FY10-Total Discharges FY09)/Total Discharges FY09
DGY1 = (Total Discharges FY11-Total Discharges FY10)/Total Discharges FY10
Average Annual Growth Rate = (DGY2+DGY1) / 2

Total Discharges	FYB	FYE	W/S S-3, Part I, Line 12, Col 15	Prior Year	Current Year	Increase / (Decrease)	Growth Rate
3rd Prior Year	N/A	N/A	N/A				
2nd Prior Year	10/1/2009	9/30/2010	8,230	N/A	N/A	N/A	N/A
1st Prior Year	10/1/2010	9/30/2011	8,179	8,230	8,179	(51)	-0.6197%
Base Year	10/1/2011	9/30/2012	8,365	8,179	8,365	(186)	-2.2741%
				Total Increase / (Decrease)			-1.6544%
				Average Annual Growth Rate			**0.8272%**

Table 49 - Revised Alternate Hospital Calculation Growth Rate Example

For Year 2 and Year 3 calculations, Base Year Data remains the same and only the Growth Rate is adjusted.

Step 2a: Recalculate Projected Total Discharges

North Carolina will use the recalculated Average Annual Growth Rate from Step 1 (Year 2) and apply it to the Year 1 (Base Year) discharges to recalculate and project Total Discharges for Year 2, Year 3, and Year 4. Projected Discharge figures will be rounded to the nearest whole number.

Current Year – The Data Source is worksheet S-3 Part 1, Line 12, Col. 15
Example: 8,179 Base Year Total Discharges

Year 2 Projected = [Number of discharges in Current Year * (1 + Average Annual Growth Rate)]
Example: [8,179 * (1 + 0.008272)] = 8,247

Year 3 Projected = [Year 2 Projected * (1 + Average Annual Growth Rate)]
Example: [8,247 *(1 + 0.008272)] = 8,315

Year 4 Projected = Year 3 Projected * (1+ Average Annual Growth Rate)
Example: [8,315 * (1 + 0.008272)] = 8,384

Step 2b (Year 2): Re-Calculating the Total Discharge Related Amount

The Overall EHR Amount includes a discharge related amount of an additional $200 per projected discharges between 1,150 and 23,000 discharges. No amount is calculated for discharges prior to the 1,150th discharge or for discharges after the 23,000th discharge.

The following formula will be utilized to calculate the discharge related amount for years 1 through 4.

Discharge related amount for Year 1 = (Current Year Projected Discharges under 23,000 – 1149) * $200
Discharge related amount for Year 2 = (Year 2 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 3 = (Year 3 projected discharges under 23,000 – 1149) * $200
Discharge related amount for Year 4 = (Year 4 projected discharges under 23,000 – 1149) * $200

	Per Discharge Amount	Projected Total Discharges	Disallowed Discharges	Allowable Discharges	Amount
Year 1	$200	8,179	1,149	7,030	$1,406,000
Year 2	$200	8,247	1,149	7,098	$1,419,600
Year 3	$200	8,315	1,149	7,166	$1,433,200
Year 4	$200	8,384	1,149	7,235	$1,447,000
Total Discharge Related Amount					**$5,705,800**

Table 50 - Revised Alternate Hospital Calculation Total Discharge Amount Example

Step 3 (Year 2): Recalculate the Initial EHR Amount for 4 Years

The Initial Amount is = a base amount of $2,000,000 + the total discharge related amount for each year.

Calculate Initial Amount	Year 1	Year 2	Year 3	Year 4
Base Amount	$2,000,000	$2,000,000	$2,000,000	$2,000,000

Calculate Initial Amount	Year 1	Year 2	Year 3	Year 4
Discharge Related Amount	$1,406,000	$1,419,600	$1,433,200	$1,447,000
Aggregate EHR Amount	**$3,406,000**	**$3,419,600**	**$3,433,200**	**$3,447,000**

Table 51 - Revised Alternate Hospital Calculation Aggregate EHR Amount Example

Step 4 (Year 2): Re-Apply the Medicaid Transition Factor for Each of the 4 Years

Transition Factor Year 1 = 1.00
Transition Factor Year 2 = 0.75
Transition Factor Year 3 = 0.50
Transition Factor Year 4 = 0.25

	Year 1	Year 2	Year 3	Year 4
Aggregate EHR	$3,406,000	$3,419,600	$3,433,200	$3,447,000
Transition Factor	1.00	0.75	0.50	0.25
Applied Amount	**$3,406,000**	**$2,564,700**	**$1,716,600**	**$861,750**

Table 52 - Revised Alternate Hospital Calculation Medicaid Transition Factor Example

Step 5 (Year 2): Recalculate the Overall EHR Amount for 4 Years

Add the Aggregate EHR Amount for all four years after application of the Transition Factor.

Payment Year	Payment Amount
Year 1	$ 3,406,400
Year 2	$ 2,564,700
Year 3	$ 1,716,600
Year 4	$ 861,750
Total	**$ 8,549,050**

Table 53 - Revised Alternate hospital Calculation Overall EHR Amount Example

Step 6 (Year 2): Medicaid Share of the Overall EHR Amount for Four Years

The Medicaid share calculation shall use the same base year cost report data as the Year 1 calculation; therefore, the Medicaid share remains unchanged from the Year 1 calculation.

Step 7 (Year 2): Recalculate the Medicaid Aggregate EHR Incentive Payment Amount

Aggregate EHR payment = Medicaid Share (Step 6 from Year 1) * Overall EHR Amount (Step 5, Year 2)

Overall EHR Amount for 4 Years	$8,549,050
Medicaid Share	0.123750513
Medicaid Aggregate EHR Incentive Payment Amount (to be paid over a 3 year period)	**$1,057,949**

Table 54 - Revised Alternate Hospital Calculation Aggregate Share Example

Step 8 (Year 2): Recalculate the Annual EHR Incentive Payment Amount

Payments will be made over a three-year period for the Overall EHR amount with Year 1 payment at 50 percent, Year 2 payment at 40 percent, and Year 3 payment at 10 percent.

Payment Year	Percentage	Payment
Year 1 Payment	50%	$528,974
Year 2 Payment	40%	$423,180
Year 3 Payment	10%	$105,795
Year 4 Payment	0%	$0
Total		**$1,057,949**

Table 55 - Revised Alternate Hospital Calculation Annual EHR Incentive Payment Example

Step 9 (Year 2): Calculation Revision in Year 2 based on Additional Full Year of Cost Report Data

	Year 1		
Prior Calculation for Medicaid EHR Payment	$525,302		
Revised Calculation for Medicaid EHR Payment	$528,974		
Difference to Apply to Year 2	**$3,672**		
	Calculation	**Revision**	**Payment**
Year 1 Payment	$525,302	$-	$525,302
Year 2 Payment	$423,180	$3,672	$426,852
Year 3 Payment	$105,795	$-	$105,795
Total Payment			**$1,057,949**

Table 56 - Revised Alternate Hospital Calculation Example

C.5.3.3 Adjustments to EHR Incentive Payments Received by Eligible Hospitals

North Carolina Medicaid shall recalculate and adjust EHR Incentive Payments received by EHs under the following circumstances:

- When recalculation and adjustment is required for Year 2 and Year 3 Payments in accordance with the Alternate Payment Calculation (*Section C.5.3.1: Standard Payment Calculation*); and,

- Upon discovery of any errors, omissions, or ineligible data submitted by the EH in the attestation that was utilized by North Carolina Medicaid to calculate the original EHR Incentive Payment amount received by the EH.

Adjustments to the original calculation of the EHR Incentive Payment amount received by the EH will be based upon the corrected cost report data relevant to the original payment calculation that covers the same full 12-month cost reporting periods pertinent to the original calculation.

Adjustment amounts determined to be an overpayment of the AIU incentive payment shall be recovered by North Carolina Medicaid from the EH. Adjustment amounts determined to be an underpayment of the original EHR Incentive Payment will be disbursed by North Carolina Medicaid to the EH.

All EHs are subject to audit and verification of meeting eligibility requirements. Hospitals who have received an EHR incentive payment that are subsequently found ineligible shall have all ineligible payments immediately recovered.

All EHs are subject to audit and verification of meeting MU criteria. The MU audits will be conducted by CMS. EHs who have received an EHR incentive payment that are subsequently found not to be have met MU criteria shall have all ineligible payments immediately recovered.

C.5.4 Payment Process

Providers are eligible to be paid after verifications for registration, patient volume, AIU attestation, MU attestation, other eligibility requirements, and final CMS clearance are complete. The payment process consists of multiple checks, communications, and coordination between systems and groups.

C.5.4.1 Payment Assignment

EPs have the option of designating an alternate payee (other than themselves) provided the payee is either an employer or another organization with which the EP has a business financial relationship. EPs will designate a payee NPI in the CMS R&A during CMS registration.

EPs may update their payee designation any time before payment occurs by updating the CMS R&A, withdrawing their NC-MIPS attestation (if already submitted), confirming the new payee NPI and associated NC MPN pre-populated in the NC-MIPS Portal, and resubmitting their electronic and signed attestations.

At this time, North Carolina has made the policy choice not to designate an entity promoting the adoption of CEHRT for the assignment of five percent of any EP's individual EHR incentive payment. EPs are free to make any such payments on their own after the state has issued a payment to them or their assignee. The state reserves the right to designate such entities in a future version of the SMHP.

C.5.4.2 Payments under Managed Care

Legislation passed in 2011 required the NC DHHS to restructure the management responsibilities for the delivery of services to individuals with mental illness, intellectual and other developmental disabilities, and substance abuse disorders through the 1915 (b)/(c) Medicaid Waiver. The goal of the legislation was to establish a system that is capable of managing public resources available for mental health, intellectual and other developmental disabilities and substance abuse services, including federal block grant funds, federal funding for Medicaid and Health Choice, and all other public funding sources.

North Carolina has utilized a managed care delivery system called Piedmont Behavioral Health (PBH) since April 2005. The statewide expansion of the 1915 (b)/(c) Waiver builds on this PBH model. PBH's managed care model includes a 1915(b) waiver program called Piedmont Cardinal Health Plan (PCHP). This capitated managed care

arrangement is a Pre-paid Inpatient Health Plan, since it includes coverage for inpatient as well as outpatient mental health services. Additionally, a 1915(c) waiver program, Innovations Waiver, exists as a Home- and Community-Based Services capitated program for individuals with intellectual or developmental disabilities.

The MH/DD/SA services for Medicaid recipients and the uninsured in NC will be managed by 11 LMEs that will function as Managed Care Organizations (MCO) based upon the pilot model created by DHHS and PBH. Implementation is being staged in tiers which began in October 2011 with the last set of LME–MCOs planning to begin operation in January 2013. State law requires the transition of the entire state to the 1915 (b)/(c) Medicaid Waiver by July 1, 2013.

The Final Rule did not extend eligibility to all the behavioral healthcare providers operating under the PBH model. Those possibly qualifying as EPs would include physicians with a psychiatric specialty and Certified Nurse Practitioners who would attest individually and not as a part of the managed care entity. Hospitals paid out of the capitated funds through a PHIP would receive normal fee for service amounts as payment for covered beneficiaries.

42 CFR Part 438.6 requires that "contracts with incentive arrangements may not provide for payment in excess of 105 percent of the approved capitation payments attributable to the enrollees or services covered by the incentive arrangement, since such total payments will not be considered to be actuarially sound." DMA does not have contracts with individual providers under its managed care arrangements. While individual physicians and nurse practitioners practicing with managed care entities may attest under the EHR Incentive Program and receive incentive payments, the managed care model does not include the payment of any capitated managed care fees to individual practitioners. DMA's EHR Incentive Program also does not include payments to managed care entities since they are not eligible providers. Therefore, no risk exists for DMA to be in conflict with the requirements of 42 CFR 438.6.

C.5.4.3 State Business Rules/Payment Environment

After NC-MIPS Operations and DMA have completed validation checks on EP and EH attestations, all determinations of qualification for a payment are reviewed again by the NC-MIPS Operations Team to ensure all conditions for payment have been met. If there are issues in verifying data and determining qualification, those attestations are placed in NC-MIPS Operations' outreach queue so that further information can be sought and a determination of "qualified" or "not qualified" can be reached. If no issues are found, NC requests CMS approval for payment. Upon CMS approval, the list of EPs and EHs approved to receive payments is reviewed by the NC-MIPS Operations Team prior to sending the payment request. The list is checked against a master list of providers who have already received a payment, preventing any duplication of payments. After this final step, payment is requested through the appropriate MMIS channel, and EPs and EHs receive payment through Electronic Funds Transfer (EFT) 1-2 weeks later. Upon payment, a detailed payment report is returned and stored in NC-MIPS, and reports of paid EPs and EHs may be pulled from the Reports section of the NC-MIPS attestation validation workflow tool.

The state takes many precautions to ensure that incentive payments are accurate and appropriate. NC-MIPS Attestation Validation Portal (AVP) is designed to provide a full audit trail of all information and decisions regarding eligibility and payment calculation components. Checks on maximum payment amounts for EPs are built into the NC-MIPS AVP logic for payment calculation. Incentive payment calculations for EHs are included in this SMHP for CMS and public reference. In 2013 development, NC-MIPS will add the capability for documentation on EHR expenditures to be uploaded directly to NC-MIPS (rather than be faxed or e-mailed in) by the provider.

The state will make payments within 45 days of successful attestation in accordance with CMS policy. At times, North Carolina is faced with cash flow limitations; it is possible, though unlikely, that these limitations could delay payments. The DMA HIT Budget Prime works with the Controller's office to define strategies that will reduce the risk of payment delays. In the case that an EP or EH needs to include Medicaid encounter volumes from other states, a delay in payment could occur; these requests will be handled on a case-by-case basis.

Auditors will perform periodic checks to ensure that there were no reductions in the payment amount, including matching the calculated incentive payment to actual disbursed payment in accordance with the state's Audit Strategy.

C.5.5 Request for Federal Reimbursement

The MMIS payment logic uses unique cost center codes to ensure expenditures are drawn from appropriate funding sources. Incentive payments made to EPs and EHs are allocated to the same account within the accounting structure, which has a Financial Responsibility Center (FRC) code indicating 100 percent FFP. Likewise, invoices for contractual services are coded to, and paid from, specific cost centers created to reflect the appropriate funding source and 90/10 FFP. These unique codes assure that all fund requests from CMS are correct and documented.

Federal reporting through the CMS-64 includes all the EHR Incentive Program expenditure reporting, while the CMS-37 includes all projected EHR Incentive Program funding needs.

C.6 Appeals

There are three types of appealable actions for providers participating in the EHR Incentive Program:

- Denial of provider's eligibility to participate in the EHR Incentive Program;
- Denial or adjustment of incentive payments for EHs or EPs; and,
- Recoupment of part or all of incentive payments from EHs or EPs due to audits indicating non-compliance with AIU requirements or MU criteria.

EHR Incentive Program appeals adhere to the same process as all other Medicaid appeal proceedings, following the requirements as outlined in the North Carolina Administrative Code (NCAC), Sections 10A NCAC 22F - Program Integrity (PI), 10A NCAC 22J - Title XIX Appeals Procedures and 10A NCAC 22N - Provider Enrollment.

A separate section within the NCAC is being developed that will contain all the EHR-related administrative code necessary for establishing statutory authority in North Carolina. These rules incorporate by reference the federal citation(s) for the EHR Incentive Program and where necessary include additional rules for state-defined parameters or for clarity.

The Appeals/Hearing process for the three types of appeal processes are presented in **Table 57**.

Appeal Processes	**Denial or Adjustment of Incentive Payments for EHs**	**Non-Compliance with AIU Requirements or Meaningful Use Criteria**	**Provider Eligibility Denial**
Reconsideration Review of DMA Action	A Medicaid Eligible Hospital (EH) may request a reconsideration review upon receipt of Final Notification of **Medicaid EHR incentive payment denial or adjustment** as a result of DMA's determination that the EH does not meet all applicable requirements in subparts A and D of Part 495 of Title 42 of the Code of Federal Regulations. Final Notification means the letter sent after DMA's monitoring, verification and auditing process is complete. The Final Notification identifies the reason(s) for a payment denial or adjustment.	An Eligible Provider (EP) or EH may request a reconsideration review upon receipt of Final Notification of DMA's determination that they have **not satisfactorily demonstrated that they have met all of the required criteria to be deemed as having adopted, implemented, or upgraded certified EHR technology, as defined in 42 CFR 495.302 or have not satisfactorily demonstrated that they have met all of the required criteria necessary to be deemed a meaningful user of certified EHR technology, as defined in 42 CFR 495.4, during the EHR reporting period.** Final Notification means the letter sent after DMA's monitoring, verification and auditing	A provider may request a reconsideration review upon receipt of final notification of DMA's determination that an **EP or EH does not meet all provider enrollment eligibility criteria, consistent with 42 CFR 495.304 and 495.306, upon enrollment and re-enrollment to the Medicaid EHR payment incentive program**. Final Notification means the letter sent after DMA's verification process is complete and which identifies the eligibility criteria that DMA could not verify.

Appeal Processes	Denial or Adjustment of Incentive Payments for EHs	Non-Compliance with AIU Requirements or Meaningful Use Criteria	Provider Eligibility Denial
		process is complete and which identifies the efforts to adopt, implement or upgrade or the applicable meaningful use objectives and associated measures that could not be validated by DMA or CMS. Hospitals deemed MU non-compliant by CMS will be deemed MU non-compliant by the North Carolina EHR Incentive Program.	
Time Limit to Submit Request to Hearing Officer	The EH's request for a reconsideration review must be received by the DMA Hearing Officer within 30 calendar days of Final Notification. Requests received in excess of 30 days are considered as an improper filing and are denied. Request must be signed by the provider or the provider's attorney.	The request must be received by DHHS Hearing Officer within 15 calendar days of Final Notification. Requests received in excess of 15 days shall be considered as an improper filing and will be denied. Request must be signed by the provider or the provider's attorney.	The request must be received by DHHS Hearing Officer within 15 calendar days of Final Notification. Requests received in excess of 15 days shall be considered as an improper filing and will be denied. Request must be signed by the provider or the provider's attorney.
Scheduling Review Conference	Upon receipt of a timely request for a reconsideration review, and in the event that any informal negotiations are not successful, DMA arranges a time and date with the EH for the reconsideration review.	Upon receipt of a timely request for a reconsideration review, the EP or EH has 14 days to submit their written argument outlining their efforts to adopt, implement or upgrade certified EHR. Upon receipt of a timely request for a reconsideration review, the EP has 14 days to submit their written argument outlining specific meaningful use objectives and associated measures and that DHHS could not validate and why they feel that DHHS's determinations are	Upon receipt of a timely request for a reconsideration review, the EP or EH has 14 days to submit their written argument outlining the specific findings of fact and why DHHS's findings and denial of enrollment in the Medicaid EHR Incentive Program are not justified.

Appeal Processes	Denial or Adjustment of Incentive Payments for EHs	Non-Compliance with AIU Requirements or Meaningful Use Criteria	Provider Eligibility Denial
		not justified.	
Notice of Due Date for Written Argument; Supporting Documentation; Extensions	The DMA hearing officer notifies the EH through a letter that the EH has 14 calendar days to submit a written argument refuting the findings of DMA and that failure to submit requested documentation could be cause for dismissal of the request. All requests for extensions must be received in writing prior to the 14 calendar due date.	The DHHS hearing officer notifies the EH or EP through a letter that the EH or EP has 14 calendar days to submit a written argument refuting the findings of DHHS and that failure to submit requested documentation could be cause for dismissal of the request. All requests for extensions must be received in writing prior to the 14 calendar due date.	The DHHS hearing officer notifies the EH or EP through a letter that the EH or EP has 14 calendar days to submit a written argument refuting the findings of DHHS and that failure to submit requested documentation could be cause for dismissal of the request. All requests for extensions must be received in writing prior to the 14 calendar due date.
Reconsideration Review and Administrative Decision Letter Notice of Right to Request Contested Case Hearing pursuant to N.C.G.S. 150B-22.	After the Reconsideration Review, a Decision is communicated to the provider in a Decision Letter within 30 days of the date of the Reconsideration Review. The Letter outlines each of the EH's or EP's appeal issues and the hearing officer's determination of each issue.		
Filing a Contested Case Hearing	If the EH or EP disagrees with the decision the provider has the option of appealing to the Office of Administrative Hearings. Filings must be made within 60 days of the date the decision letter was placed in the mail to the last address provided by the EH or EP to the Medicaid agency in accordance with G.S. 150B-23.		
Notice of Contested Case and Assignment	Once the petition has been filed, a Notice of Contested Case and Assignment is sent to all parties by the Office of Administrative Hearings. This notice shows the name of the Administrative Law Judge (ALJ) who has been assigned to the case and requires that DMA submit any documentation which caused the filing of the contested case.		

Appeal Processes	Denial or Adjustment of Incentive Payments for EHs	Non-Compliance with AIU Requirements or Meaningful Use Criteria	Provider Eligibility Denial
Notice of Hearing	Not less than 15 days prior to the hearing, the EP or EH receives a Notice of Hearing. This Notice is sent by certified mail to all parties and establishes the time, date, and location of the hearing.		
The Hearing	Each party has the right to testify on his or her own behalf. Each party may also offer documents in evidence and have witnesses testify, question opposing party's witnesses and explain or rebut evidence.		
Decision of ALJ	The ALJ's decision is made in writing and contains the findings of fact and conclusions of law. Under current law, the Office of Administrative Hearings prepares the official records and submits a copy of that record to the agency responsible for making the final agency decision. DHHS has submitted a request for a waiver of the single state agency requirement that will allow OAH to make final agency decisions on behalf of the Medicaid agency. If that waiver is approved, both parties to the hearing (DMA and the EH or EP) would have the opportunity to request judicial review of any ALJ decision with which it disagreed.		
Final Agency Decision	Under current law, DMA makes the Final Agency Decision, but must adopt the ALJ's decision unless it is clearly contrary to the preponderance of the evidence. Before DMA issues a Final Decision, both Parties are given an opportunity to file exceptions and written arguments with DMA.		
Petition for Judicial Review	A party may appeal a Final Decision within 30 days after being served with a written copy of the Final Agency Decision by filing a Petition for judicial review in the Superior Court of Wake County or in the Superior Court of the county where the EP or EH resides.		

Table 57 - Appeals/Hearing Process

E. The State's HIT Roadmap

E.1 2012-2016

The program hit the ground running in 2011 and has enjoyed continued success through 2012. The next three years will be increasingly formative in the adoption of HIT and expansion of HIE connectivity and interoperability in North Carolina. As a key stakeholder, NC Medicaid anticipates annual milestones supported by the specific activities summarized in **Figure 29** below.

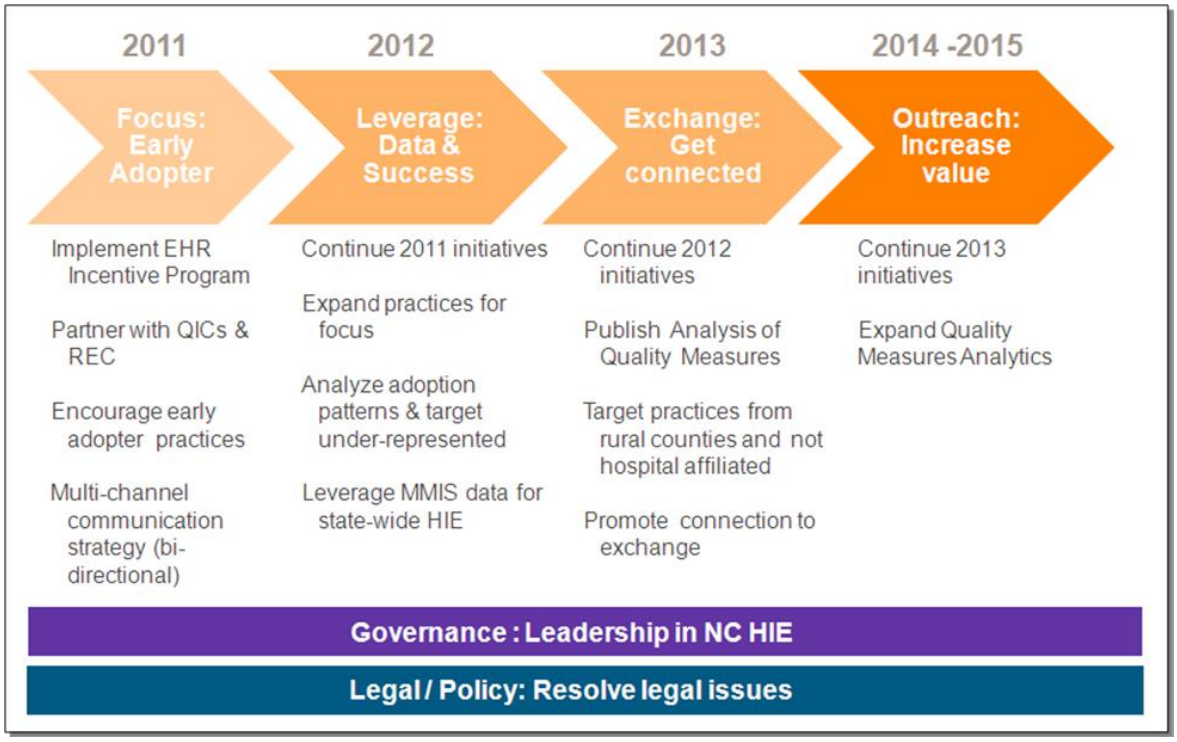


Figure 18 - State HIT and HIE Roadmap

2011

There were three main objectives which were carried out in 2011. Each played an important role in influencing EHR adoption. These objectives were:

1. Implemented the EHR Incentive Program in the first quarter of calendar year 2011.
2. Partnered with the REC to encourage early adoption: REC staff served, and continues to serve, an incredibly important role in their hands-on assistance to the provider community across the state. DMA participated in meetings and weekly office hours call with REC staff to address issues and challenges associated with EHR adoption and attestation for incentive payments.
3. Multi-channel communication strategy: NC DMA developed and executed a preliminary HIT Communication Plan toward the end of the year, including website improvements, regular articles in Medicaid provider bulletins and partner publications, outreach activities to partners and providers, and

enhanced telephone and e-mail support to ensure better awareness of the program throughout NC and efficient handling of providers' questions and concerns.

2012

The DMA HIT Team analyzed its communication and outreach efforts, NC-MIPS capabilities, and overall program performance in 2011 and developed a more proactive and comprehensive program in 2012.

Milestones achieved in 2012 include:

1. A significant ramp up in provider awareness, program participants and incentive payments disbursed.
    a. As of December 10, 2012, 4,031 unique providers (3,952 professionals and 79 hospitals) had registered with CMS and indicated that they would like to participate in the North Carolina Medicaid EHR Incentive Program.
    b. As of December 21, 2012, 2,266 total payments were disbursed to providers, up from 286 payments as of December 2011.
2. Several steps laying the groundwork for HIE occurred.
    a. A Master Services Agreement (MSA) between NC DHHS and NC HIE, establishing NC DHHS as a QO of the NC HIE, was executed.
    b. The first Scope of Work (SOW) under this MSA included Medicaid's fair share of the development of NC HIE Core Services, establishment of NC DHHS and NC HIE reporting requirements, and detailed DHHS' utilization of the NC HIE's virtual QO services.
    c. A resolution stating the Department's intentions to champion HIE in its business processes was published.
    d. DMA HIT drafted NC Administrative Code with consensus of its stakeholder groups around exchange and CQM reporting requirements for providers participating in the NC Medicaid EHR Incentive Program.
3. DMA HIT worked closely with NC HIE, N3CN, DPH, and internal DMA units throughout 2012 to plan for building the infrastructure necessary for advanced MU of clinical data in NC, including increasing provider connectivity, interoperability of the NC HIE with the NCIR and other public health systems, and a CQM data collection and reporting pathway, among other projects.

2013

It is estimated that providers who have already adopted EHRs will be increasing their use of CEHRT, adding functionalities to improve their clinical practice, and gaining comfort with the technology in 2013.

Analyzing the profile of late adopters, NC will again re-direct outreach efforts to engage those segments of the provider community. DMA HIT will continue to work closely with N3CN, which now includes the NC HIE, to ensure optimal exchange and clinical data repository functionality for all EHs and EPs. In addition, DMA HIT will work with other NC DHHS units and divisions to coordinate and align HIT efforts across the Department.

DHHS will also leverage its data sources to encourage HIE connectivity through interface development with the HIE to provide the following functionalities to NC providers:

- Work toward a bi-directional interface for the exchange of patient information between participants' EHRs and the NCIR, via the NC HIE;
- Receiving laboratory test orders/requisitions from participating providers via the NC HIE and providing test laboratory results back to providers via the NC HIE;
- Reporting of laboratory results for notifiable communicable diseases from participating laboratories to DPH via the NC HIE; and,

- Establishing with the NC HIE a public health portal through which authorized public health officials can access providers' source records within the NC HIE for disease surveillance, prevents and control follow-up investigation.

2014-2015

The data that becomes available with the introduction of Stage 2 MU measures will provide foundation for demonstrating the value of CEHRT and HIE. Quality reporting may be a key factor in the sustainability model for EHRs and HIE. As clinical healthcare data analytics become more prolific and quality measures become more important to driving improvements in quality of care and reductions in healthcare costs, providers will be even more inclined to participate in HIT/HIE initiatives.

In summary, a methodical, step-by-step, multi-faceted strategy to encourage EHR adoption will result in the improvement in the healthcare delivered in the state of North Carolina. Increased EHR adoption will result in reduced cost, improved quality and best practice, non-duplicated utilization within the NC healthcare system.

E.2 EHR Adoption Projections

It is difficult to accurately predict the rate of CEHRT adoption in NC, due to the many factors that contribute to a provider's adoption decision and timeline. There is no proven, widely-accepted model for projecting this provider behavior on the scale and precedence of the current endeavor. Below are some assumptions that NC made when determining the projections that follow:

- Adoption among providers in rural areas will lag behind those in urban and suburban areas;
- For those who have already implemented an EHR, upgrades will follow in the first year or two;
- Adoption among providers affiliated with a hospital will generally precede adoption by providers who are independent;
- Providers affiliated with a hospital will lag behind adoption by that hospital; and,
- HIE will multiply the clinical practice benefits of EHRs; thus, EHR adoption will increase as HIE is available.

The following projections represent:

- **EPs**: These percentages reflect the Medicaid professionals projected to have the qualifying minimum of 30 percent of their patient base composed of Medicaid patients. The 2012 projections also include pediatricians projected to qualify with 20 percent Medicaid patient volume.
- **EHs**: These percentages reflect all general and critical access hospitals in the state.

Please find below a description of the projected EHR adoption in NC from 2010 to 2012.

2010

The following is a projection of EHR adoption made in 2010 for the following five years. These original estimates account for 3,098 potential EPs out of 33,909 total Medicaid-enrolled professionals (9.1 percent of all NC Medicaid professionals).

	2011	**2012**	**2013**	**2014**	**2015**
Eligible Professionals	61%	70%	75%	80%	85%

	2011	2012	2013	2014	2015
Eligible Hospitals	34%	45%	60%	65%	70%

Table 58- Anticipated EP and EH Adoption Percentages, as of 2010

2011

Adoption of CEHRT in NC as measured by incentives paid in 2011 was much slower than originally anticipated, especially among EPs. As of December 31, 2011, NC Medicaid had paid 265 EPs and 21 EHs, representing 8.6 percent of EPs and 22.8 percent of EHs, per 2010 projections of eligible NC professionals and hospitals. However, around 1,000 EPs registered with CMS in 2011 for participation in the program, indicating 32.3 percent of EPs statewide have adopted or have plans to adopt CEHRT in the near future.

2012

Adoption of CEHRT in NC as measured by incentives paid in 2012 picked up dramatically from 2011. As of December 31, 2012, NC Medicaid had paid 2,150 unique EPs and 50 unique EHs (some receiving multiple payments for multiple years of participation).

In 2012, DMA refined the method to calculate providers who were potentially eligible to receive Medicaid EHR incentive payments, and revised the estimate of potentially-eligible professionals from 3,098 to 4,478. The estimate of potentially-eligible hospitals remained at 92.

The adoption percentages in the following table reflect actuals for 2011 and 2012 and revised projections for 2013-2015 based on the new estimate of 4,478 potentially-eligible professionals out of 32,185 total Medicaid-enrolled professionals (14 percent of all NC Medicaid professionals), and 92 potentially-eligible hospitals.

	2011	***2012***	**2013**	**2014**	**2015**
Eligible Professionals	*6%*	*48%*	70%	80%	85%
Eligible Hospitals	*23%*	*54%*	80%	85%	95%

Table 59 - Actual and anticipated EP and EH Adoption Percentages, as of 2012

Note that the projections for total hospital participation by the end of 2015 are higher than those of professionals as all potentially-eligible hospitals in NC are dually eligible and may participate in both the Medicaid and Medicare EHR Incentive Programs. Professionals may only participate in one program, so the 85% attainment of potentially-eligible professionals accounts for some professionals choosing to participate in the Medicare EHR Incentive Program over its Medicaid counterpart.

E.3 Annual Benchmarks for Audit and Oversight

There are three types of benchmarks and tracking activities that monitor the successes and areas of improvement for DMA's HIT endeavors. These include:

1. EHR Incentive Program audit activities will be further defined and refined in future iterations of the SMHP.
2. Progress in adoption of CEHRT and exchange in NC. NC DHHS and DMA are in the process of exploring the best options for collecting the following data to measure progress in these areas:
    a. EHR adoption rates among North Carolina providers;
    b. Number of eligible NC Medicaid and Medicare providers participating in the incentive programs and rates of attrition beyond first-year participation;
    c. Number of authorized users and participants connected to the NC HIE and number of transactions; and,
    d. Number of Direct mailboxes acquired through the NC HIE and number of messages exchanged between providers.
3. Medicaid EHR Incentive Program performance information, including data on effectiveness of provider communication and outreach activities, provider participation and attrition rates, attestation processing rate from attestation to payment, and other benchmarks will be considered. NC is participating in CMS' Performance Progress Community of Practice and expects to shape its program performance benchmarks around the resulting recommendations.

As of 2012, DMA is using data to finely target outreach and audits and improve the program's effectiveness. Examples of this include tracking metrics around attestation processing time and payments disbursed, analyzing participation trends by provider type and specialty, tracking payment delays due to provider outreach, and setting improvement benchmarks and deadlines around the findings.

Beginning in 2014-2015, NC expects to:

1. Develop tools to measure patient engagement through MU measures analysis, patient surveys, and NC HIE Patient Portal access;
2. Develop a plan to evaluate return on investment utilizing clinical outcome measures and Medicaid claims data; and,
3. Actively engage CMS to develop a plan for monitoring performance progress and metrics collection.

Appendix 1 - Acronyms and Abbreviations

Acronyms and Abbreviations	
ACA	Accountable Care Act
ADT	Admission, Discharge and Transfer
AHEC	Area Health Education Centers
AHRQ	Agency for Healthcare Research and Quality
AIU	Adopt, Implement, Upgrade
ARRA	American Recovery and Reinvestment Act
AVP	Attestation Validation Portal
BCBSNC	Blue Cross Blue Shield of North Carolina
BTOP	Broadband Technology Opportunities Program
CAH	Critical Access Hospital
CAI	Community Anchor Institution
CBOC	Community Based Outpatient Clinic
CCD	Continuity of Care Document
CCHA	Coastal Carolinas Health Alliance
CCHIE	Coastal Connect Health Information Exchange
CCME	Carolinas Center for Medical Excellence
CCN	CMS Certified Number
CCNC	Community Care of North Carolina
CCNC-UP	CCNC for Uninsured Parents
CCofSP	Community Care of the Southern Piedmont
CCR	Central Cancer Registry

CDC	Centers for Disease Control
CDSA	Child Development Service Agency
CEHR	Children's Electronic Health Record
CHA	Cabarrus Health Alliance
CEHRT	Certified Electronic Health Record Technology
CHC	Community Health Center
CHIP	Children's Health Insurance Program
CHIPRA	Children's Health Insurance Program Reauthorization Act
CHOW	Change of Ownership
CIH	Cherokee Indian Hospital
CIP	Capital Improvement Program
CIS	Credentialing Information System
CMIS	Case Management Information System
CMS	Centers for Medicare & Medicaid Services
CMS R&A	CMS Registration and Attestation System
CPOE	Computerized Physician Order Entry
CQM	Clinical Quality Measure
CRH	Central Regional Hospital
CSC	Computer Sciences Corporation
DCHI	Duke University Center for Health Informatics
DDR	Daily Disease Reporting
Department	North Carolina Department of Health and Human Services
DHHS	North Carolina Department of Health and Human Services
DMA	Division of Medical Assistance

DMH/DD/SAS	Division of Mental Health/Developmental Disabilities/Substance Abuse Services
DPH	Department of Public Health
DRIVE	Data Retrieval and Information Validation Engine
DSOHF	Division of State Operated Healthcare Facilities
ED	Emergency Department
EFT	Electronic Funds Transfer
EH	Eligible Hospital
EHR	Electronic Health Record
EMSPIC	EMS Performance Improvement Center
EMR	Electronic Medical Record
EMS	Emergency Medical Services
e-NC	e-North Carolina Authority
EP	Eligible Professional
EPSDT	Early and Periodic Screening, Diagnostic and Treatment
ESB	Enterprise Service Bus
EVC	NC Medicaid's Enrollment, Verification, and Credentialing System/Center
FFP	Federal Financial Participation
FFS	Fee-For-Service
FIP	Facilities Investment Programs
FPL	Federal Poverty Level
FQHC	Federally Qualified Health Center
FRC	Financial Responsibility Center
FTE	Full-time Employee

GLRBI	Golden LEAF Rural Broadband Initiative
GUI	Graphical User Interface
HHS	Health and Human Services
HIE	Health Information Exchange
HIO	Health Information Organization
HIPAA	Health Insurance Portability and Accountability Act
HIS	Health Information System
HIT	Health Information Technology
HIT Plan	NC Medicaid Health Information Technology Plan
HITECH	Health Information Technology for Economic and Clinical Health Act
HIT Task Force	North Carolina HIT Strategic Planning Task Force
HO	Hearing Office
HP	Hewlett Packard
HPES	Hewlett Packard Enterprise System
HRSA	Health Resources Services Administration
HSIS	Health Services Information System
HWTFC	Health and Wellness Trust Fund
HWTFC	Health and Wellness Trust Fund Commission
I-APD	Implementation Advanced Planning Document
IC	Informatics Center
IDN	Integrated Delivery Networks
IDS	Increased Demand for Community Health Center Services
IHS	Indian Health Services
IPH	Institute for Public Health

IPIP	Improving Performance in Practice
IT	Information Technology
ITS	Information Technology Services
LHD	Local Health Department
LME	Local Management Entities
LMFT	Licensed Marriage and Family Therapist
MCNC	Microelectronics Center of North Carolina
MCO	Managed Care Organization
MFCU	Medicaid Fraud Control Unit
MITA	Medicaid Information Technology Architecture
MMIS	Medicaid Management Information System
MPN	Medicaid Provider Number
MSA	Master Service Agreement
MU	Meaningful Use
NC	North Carolina
N3CN	North Carolina Community Care Networks
NC EDSS	NC Electronic Disease Surveillance System
NC HIE	North Carolina Health Information Exchange
NC OEMS	The North Carolina Office of Emergency Services
NCAC	North Carolina Administrative Code
NCAS	North Carolina Accounting System
NCB-Prepared	North Carolina Bio-Preparedness Collaborative
NCCHCA	North Carolina Community Health Center Association
NC DETECT	NC Disease Event Tracking and Epidemiologic Collection Tool

NCHA	North Carolina Hospital Association
NCHESS	North Carolina Hospital Emergency Surveillance System
NCHEx	North Carolina Healthcare Exchange
NCHICA	North Carolina Healthcare Information and Communications Alliance
NCID	North Carolina Identifier
NCIR	North Carolina Immunization Registry
NC-MIPS	NC Medicaid Incentive Payment System
NCMS	North Carolina Medical Society
NCMSF	North Carolina Medical Society Foundation
NC PATH	North Carolina Program to Advance Technology for Health
NCREN	North Carolina Research and Education Network
NCRHC	North Carolina Rural Health Center
NCTN	North Carolina TeleHealth Network
NCTN-H	North Carolina TeleHealth Network - Hospitals
NC TRACKS	NC Transparent Reporting, Accounting, Collaboration, and Knowledge Management System
NHIN	Nationwide Health Information Network
NPI	National Provider Identifier
NTIA	National Telecommunications and Information Administration
NwHIN	Nationwide Health Information Network
OHIT	Office of Health Information Technology
OMMISS	Office of Medicaid Management Information System Services
ORHCC	Office of Rural Health and Community Care
ONC	Office of the National Coordinator

OSC	Office of the State Chief Information Officer
PA	Physician Assistant
PAC	Picture Archiving and Communication
PAM	Patient Activation Measure
PBH	Piedmont Behavioral Health
PCG	Public Consulting Group
PCHP	Piedmont Cardinal Health Plan
PECOS	Provider Enrollment, Chain, and Ownership System
PI	Program Integrity
PMO	Project Management Office
PreMis	Pre-Hospital Medical Information System
Program	North Carolina Medicaid EHR Incentive Program
PSO	Patient Safety Organization
QI	Quality Improvement
QIC	Quality Improvement Consultants
QIS	Quality Improvement Specialists
QMAF	Quality Measures and Feedback
QO	Qualified Organization
RAID	Redundant Array of Independent Disks
RCHD	Rowan County Health Department
REC	Regional Extension Center
RFP	Request for Proposal
RHC	Rural Health Center
RPMS	Resource Patient Management System

SCHIEx	South Carolina Health Information Exchange
SCHIP	State Children's Health Insurance Program
SCIO	State Chief Information Officer
SERCH	Southeast Regional HIT-HIE Collaboration
SFTP	Secure File Transfer Process
SHAP	State Health Access Program
SL	Session Law
SMARTT	State Medical Asset Resource Tracking Tool
SMHP	State Medicaid HIT Plan
SNG	Strategic Networks Group
SOA	Service-Oriented Architecture
SOW	Statement of Work
SPBC	Southern Piedmont Beacon Community
SS-A	State Self-Assessment
STEMI	EMS response time, acute trauma care, acute cardiac care
TIN	Taxpayer Identification Number
UBT	University Based Training
UNC-CH	University of North Carolina at Chapel Hill
UPI	Unique Patient Identifier
VA	Veterans Affairs
VistA	Veterans Administration Electronic Health Record
vSPR	Virtual Single Patient Record
WIC	Women, Infant, and Children
WNCHN	Western North Carolina Health Network

Appendix 2 - 2010 NC Provider Survey

CSC 50 YEARS STRONG

NC Medicaid EVC Center

Please answer the following questions:

1. Does your practice use an electronic health record/electronic medical record EHR/EMR?
   Definition: A set of products and services that provide an integrated solution, including clinical and business applications, to automate a clinical practice for the purpose of increasing efficiency, quality, and safety.)

   Yes, all electronic Yes, part paper, part electronic No Do not know (circle one)

   1.1 If yes, please name the product(s) _____

   1.2 If yes, what year did you purchase an EHR? _____

2. Is the electronic health record system integrated with a hospital system where you admit patients (i.e. your patient's ambulatory EHR is accessible through the hospital's EHR system)?
   Yes No Don't Know (circle one)

3. If you use an electronic health record, does it meet certification standards?
   Yes No Don't Know (circle one)

4. If you are not currently using an EHR, do you plan to purchase one in the next 6 to 12 months?
   Yes, in _____months No (circle one)

5. What is/was your greatest barriers to EHR adoption?
   Yes No (circle one)

Financial

a. The amount of capital needed to acquire and implement an EHR	Major Minor N/A
b. Uncertainty about the return on investment (ROI) from an EHR	Major Minor N/A

Organizational Barriers

c. Resistance to adoption from practice physicians	Major Minor N/A
d. Capacity to select, contract, install and implement an EHR	Major Minor N/A
e. Concern about loss of productivity during transition to an EHR	Major Minor N/A

Legal or Regulatory Barriers

f. Concerns about inappropriate disclosure of patient information (i.e. breaches of patient confidentiality)	Major Minor N/A
g. Concerns about illegal record tampering or "hacking"	Major Minor N/A
h. Concerns about the legality of accepting an EHR that is donated from a hospital	Major Minor N/A
i. Concerns about physicians' legal liability if patients have more access to information in their medical records	Major Minor N/A

State of the Technology

j. Finding an EHR system that meets providers' needs	Major Minor N/A
k. Concerns that the system will become obsolete	Major Minor N/A

6. In your opinion, what level of impact would the following have in incentivizing physicians to adopt an EHR?

Legal or Regulatory Incentives

a. Change the law to protect physicians from personal liability for record tampering by external parties or for privacy and security breaches	Major Minor N/A

b. Concerns about legal liability as a result of NOT using the latest technology — Major Minor N/A

State of the Technology

c. Published certification standards that indicate whether an EHR has the necessary capabilities and functions. — Major Minor N/A

Financial Incentives

d. Incentives for the purchase of an EHR (e.g. tax credits,low interest loans, grants) — Major Minor N/A

e. Additional payment for the use of an EHR (i.e. additional reimbursement for using an EHR). — Major Minor N/A

7. Are you using electronic-prescribing? — Yes No (circle one)

8. Are you using a hand held device or computer to send or receive pharmacy prescriptions? (circle one/ or both)

If yes, please name the product _____

If yes, what year did you begin? _____

9. Do you see Medicare patients? — Yes No (circle one)

Appendix 3 - NCHA Survey Questions (2011)

1. Are you aware of the NC Medicaid EHR Incentive Program?

2. In what year do you plan to initially apply for the NC Medicaid EHR Incentive Program?

    In FFY 12?

    In FFY 13?

    In FFY 14?

    After FFY 14?

3. What is the amount you estimate you will receive as an incentive payment?

    Fill-in the blank

    Do not know

4. What types of information would you like to receive regarding the NC Medicaid EHR Incentive Program? Check all that apply

    Information about registration and attestation

    Information on Meaningful Use

    Information on calculating your estimated incentive payment

    Information on program and policy updates

    Other topics

    Fill-in-the-blank box

5. What format would you like to receive information from the EHR Incentive Program?

    Program website

    Updates through NCHA

    Medicaid Provider Bulletin

    Opt-in program e-newsletter

    Informational webinar

    Other ways

    Fill-in-the-blank box

Appendix 4 - 2012 NC Medicaid EHR Incentive Program Survey (EPs)

2012 NC Medicaid Electronic Health Record (EHR) Incentive Program Survey

Respondents:	1143 displayed, 1143 total	Status:	Closed
Launched Date:	12/12/2012	Closed Date:	01/01/2013

1. Practice Ownership

	Response Total	Response Percent	Points	Avg
Physician-owned	453	47%	n/a	n/a
HMO	0	0%	n/a	n/a
Federally-Qualified Health Center (FQHC)	34	3%	n/a	n/a
Rural Health Center (RHC)	25	3%	n/a	n/a
University-affiliated (i.e., UNC, Duke, ECU, Wake Forest, etc.)	19	2%	n/a	n/a
Other, please specify view	443	46%	n/a	n/a
Total Respondents	973	100%		
(skipped this question)	170			

2. Provider Specialty

	Response Total	Response Percent	Points	Avg
Primary Care	142	15%	n/a	n/a
Surgery	30	3%	n/a	n/a
Pediatrics	103	11%	n/a	n/a
Dentistry	90	9%	n/a	n/a
Nurse Practitioner	19	2%	n/a	n/a
Certified Nurse Midwife	0	0%	n/a	n/a
OB/GYN	32	3%	n/a	n/a
Internal Medicine	22	2%	n/a	n/a
Physician Assistant	4	0%	n/a	n/a
Other, please specify view	513	54%	n/a	n/a
Total Respondents	952	100%		
(skipped this question)	191			

3. Are you aware of the NC Medicaid EHR Incentive Program?

	Response Total	Response Percent	Points	Avg
Yes	607	64%	n/a	n/a
No	340	36%	n/a	n/a
Total Respondents	947			
(skipped this question)	196			

4. Does your practice currently use an electronic health record (EHR) or electronic medical record (EMR)?

	Response Total	Response Percent	Points	Avg
Yes	524	55%	n/a	n/a
No	423	45%	n/a	n/a
Total Respondents	947	100%		
(skipped this question)	196			

5. What is the name of the EHR/EMR that you use in your practice?

View responses to this question	view
Total Respondents	432
(skipped this question)	711

6. If you have already implemented EHR technology in your practice, to what degree has it affected workplace efficiences?

	Response Total	Response Percent	Points	Avg
Much more efficient	147	32%	n/a	n/a
Somewhat more efficient	191	41%	n/a	n/a
No difference in efficiency	43	9%	n/a	n/a
Somewhat less efficient	59	13%	n/a	n/a
Much less efficient	21	5%	n/a	n/a
Total Respondents	461	100%		
(skipped this question)	682			

7. If you have already implemented EHR technology in your practice, to what degree has it affected the quality of patient care?

	Response Total	Response Percent	Points	Avg
Greatly improved the quality of patient care	91	20%	n/a	n/a
Somewhat improved the quality of patient care	192	42%	n/a	n/a
No difference in the quality of patient care	143	31%	n/a	n/a
Somewhat decreased the quality of patient care	26	6%	n/a	n/a
Greatly decreased the quality of patient care	4	1%	n/a	n/a
Total Respondents	456	100%		
(skipped this question)	687			

8. What are your plans for participation in the EHR Incentive Program(s)?

	Response Total	Response Percent	Points	Avg
I am already participating in the NC Medicaid EHR Incentive Program	156	21%	n/a	n/a
I am already participating in the Medicare EHR Incentive Program	104	14%	n/a	n/a
I plan to participate in the NC Medicaid EHR Incentive Program in the future	201	27%	n/a	n/a
I plan to participate in the Medicare EHR Incentive Program	85	11%	n/a	n/a
I do no plan to participate in either of the EHR Incentive Programs	195	26%	n/a	n/a
Total Respondents	741	100%		
(skipped this question)	402			

9. If you have not yet adopted certified EHR technology, do you plan on purchasing on within the next six to 12 months?

	Response Total	Response Percent	Points	Avg
Yes	132	19%	n/a	n/a
No	195	28%	n/a	n/a

N/A (If you have already adopted a certified EHR technology, please skip to question 11 on the next page).		371	53%	n/a	n/a
	Total Respondents	698	100%		
	(skipped this question)		445		

10. If you have not yet adopted a certified EHR technology, what barriers to EHR adoption do you face? (Select all that apply)

		Response Total	Response Percent	Points	Avg
Amount of capital needed to acquire and implement an EHR (Financial)		223	27%	n/a	n/a
Uncertainty about the return on investment of an EHR (Financial)		128	15%	n/a	n/a
Resistance to adoption (Organizational)		39	5%	n/a	n/a
Capacity to select, contract, install and implement an EHR (Organizational)		91	11%	n/a	n/a
Concern about loss of prodcutivity during transition to an EHR (Organizational)		95	11%	n/a	n/a
Concern about inappropriate disclosure of patient information (i.e. breaches of patient confidentiality) (Legal/Regulatory Barriers)		71	8%	n/a	n/a
Concern about illegal record tampering or 'hacking' (Legal/Regulatory Barriers)		66	8%	n/a	n/a
Concern about the legality of accepting an EHR that is provided by a hospital (Legal/Regulatory Barriers)		16	2%	n/a	n/a
Concern about physicians' liability if patients have more access to information in		33	4%	n/a	n/a

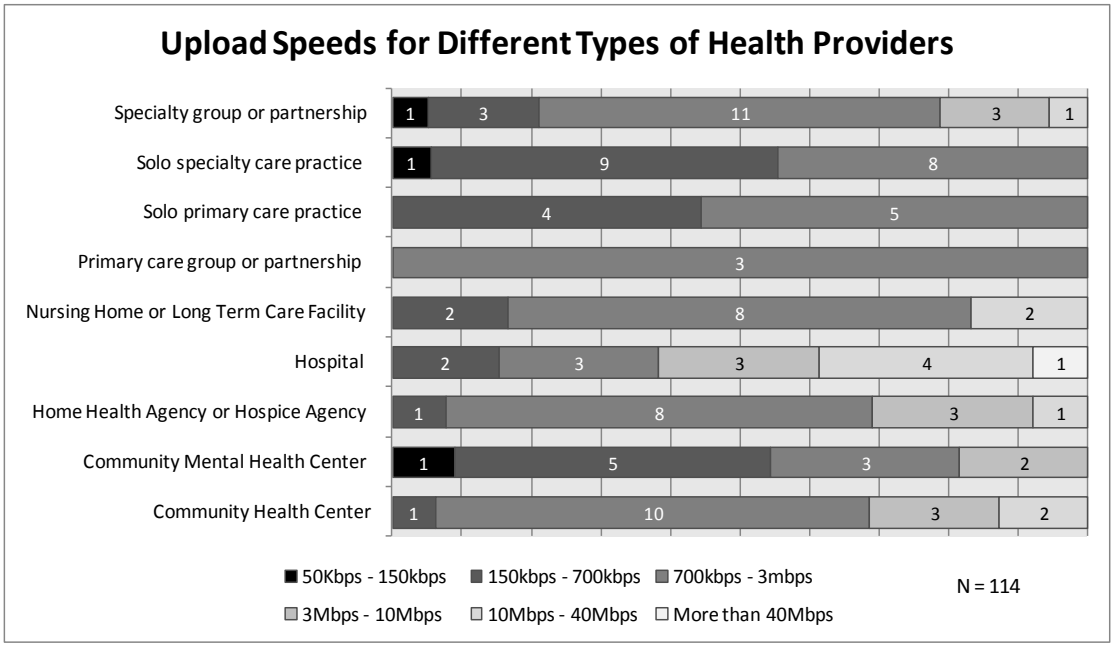
their medical records (Legal/Regulatory Barriers)				
Finding an EHR system that meets providers' needs (Technology)	144	17%	n/a	n/a
Concerns that the system will become obsolete (Technology)	82	10%	n/a	n/a
N/A (If you have already adopted a certified EHR technology, please skip to question 11 on the next page).	187	22%	n/a	n/a
Other, please specify view	838	100%	n/a	n/a
Total Respondents	838			
(skipped this question)	305			

11. If you have any additional feedback, please write it here.

View responses to this question view

Total Respondents	179
(skipped this question)	964

Appendix 5 - Broadband Survey (2010)



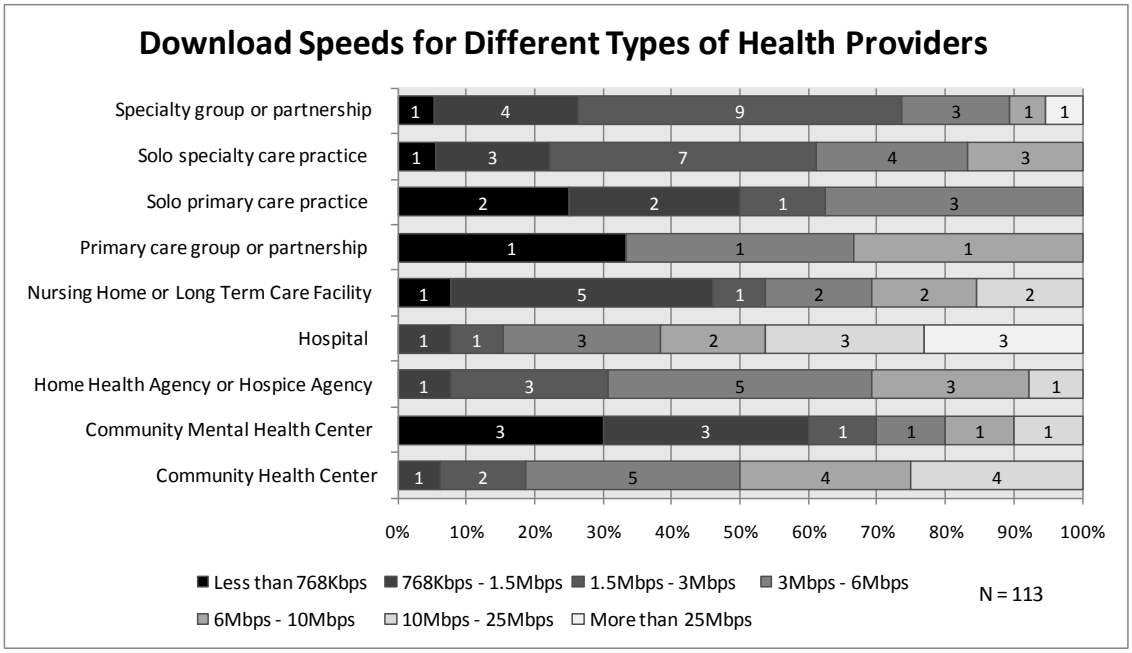


Figure 19 - Broadband Survey (2010)

Mobility has emerged as an important function for health organizations, with 62 percent of organizations stating that mobile Web functions were either essential or very important to their organization. The primary tool for mobile web functions is the laptop computer, used by almost 80 percent of respondents' establishments. Web-

enabled mobile phones are used by 55.4 percent, while other handheld devices are used by 36.2 percent of establishments.

Utilization

The study identified how establishments used a variety of processes and applications in the health sector. The database can analyze utilization by size, type and general location characteristics. This report includes only a summary and some notable observations.

In contrast, adoption or planning for remote services, such as home based services and remote monitoring, have relatively low levels of adoption and very limited evidence of growth, as reflected in **Figure 31 and Figure 32)** - Use of Health Applications by Type of Institutional and Private Practice Health Provider) below.

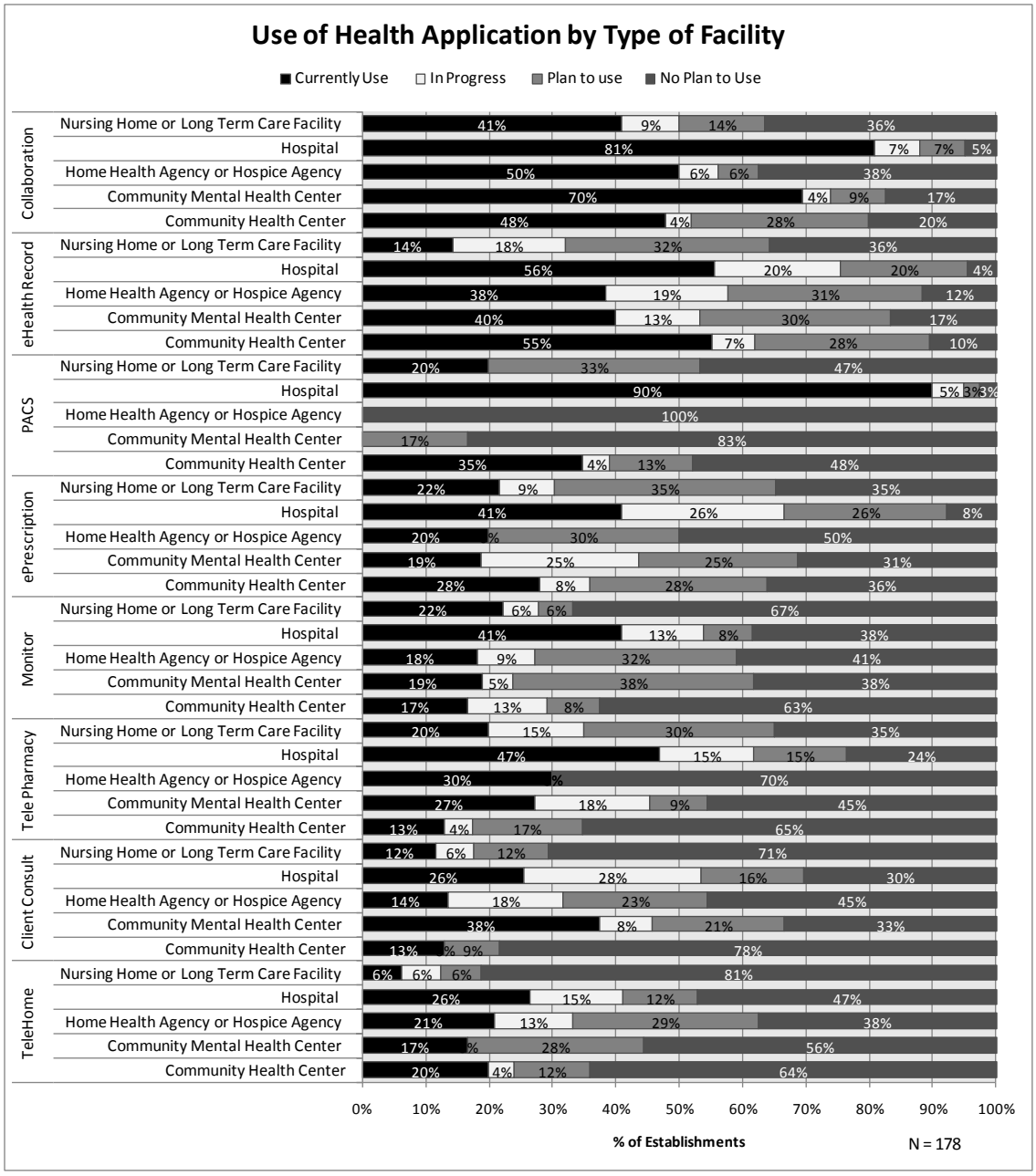


Figure 20 - Use of Health Applications by Type of Institutional Health Provider (2010)

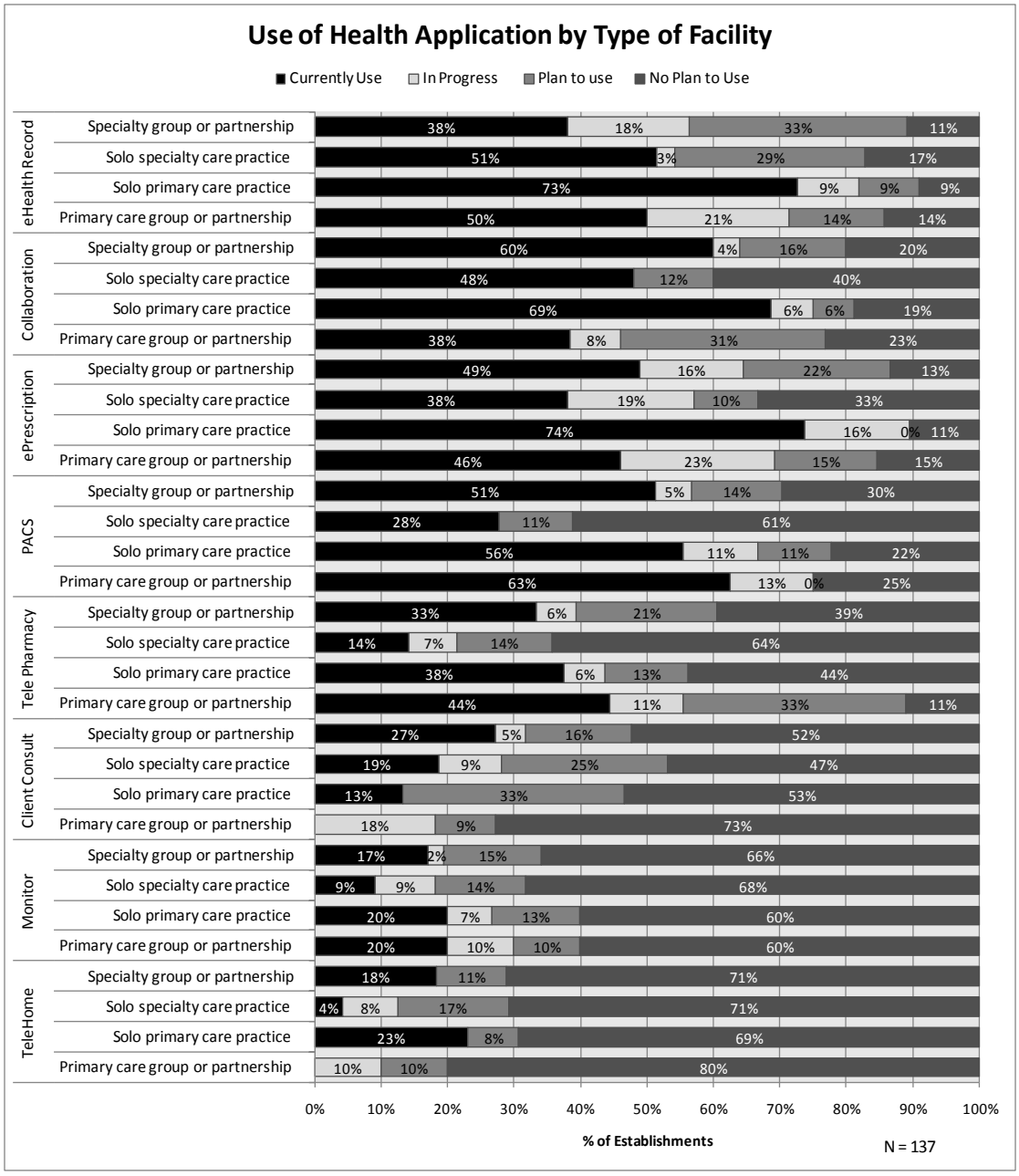


Figure 21 - Use of Health Applications by Type of Private Practice (2010)

Barriers

In looking at the barriers to adoption of broadband enabled processes and applications, the health sector shares in society's prioritization of security and privacy as the top two barriers. However, other health sector specific issues are also of major concern, among them costs, system compatibility, reimbursement, quality of outcomes, and regulatory issues. Still significant, but at the lower end of the priority list, were more human issues such as loss of personal contact and acceptance by consumers and other health providers (See **Figure 34**- Barriers to Adoption of Health-related e-Solutions).

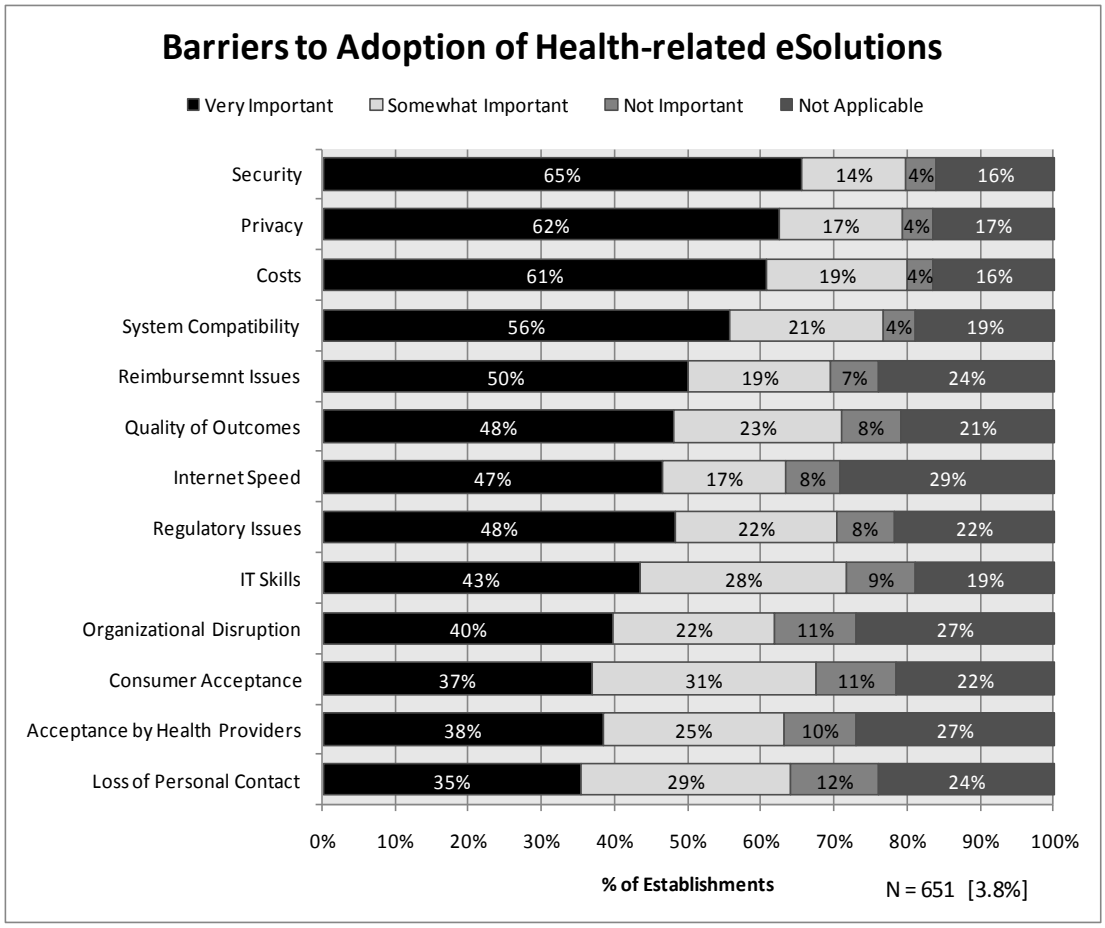


Figure 22 - Barriers to Adoption of Health-related e-Solutions (2010)

Various types of health providers differed in their assessment of some barriers to adoption of broadband. Significant differences were found in assessment of Internet speeds (they matter more to hospitals) and loss of contact with patient (really matters to community mental health centers, but far less to community health centers). (See **Figure 34** - Barriers to Adoption of eSolutions by Type of Provider).

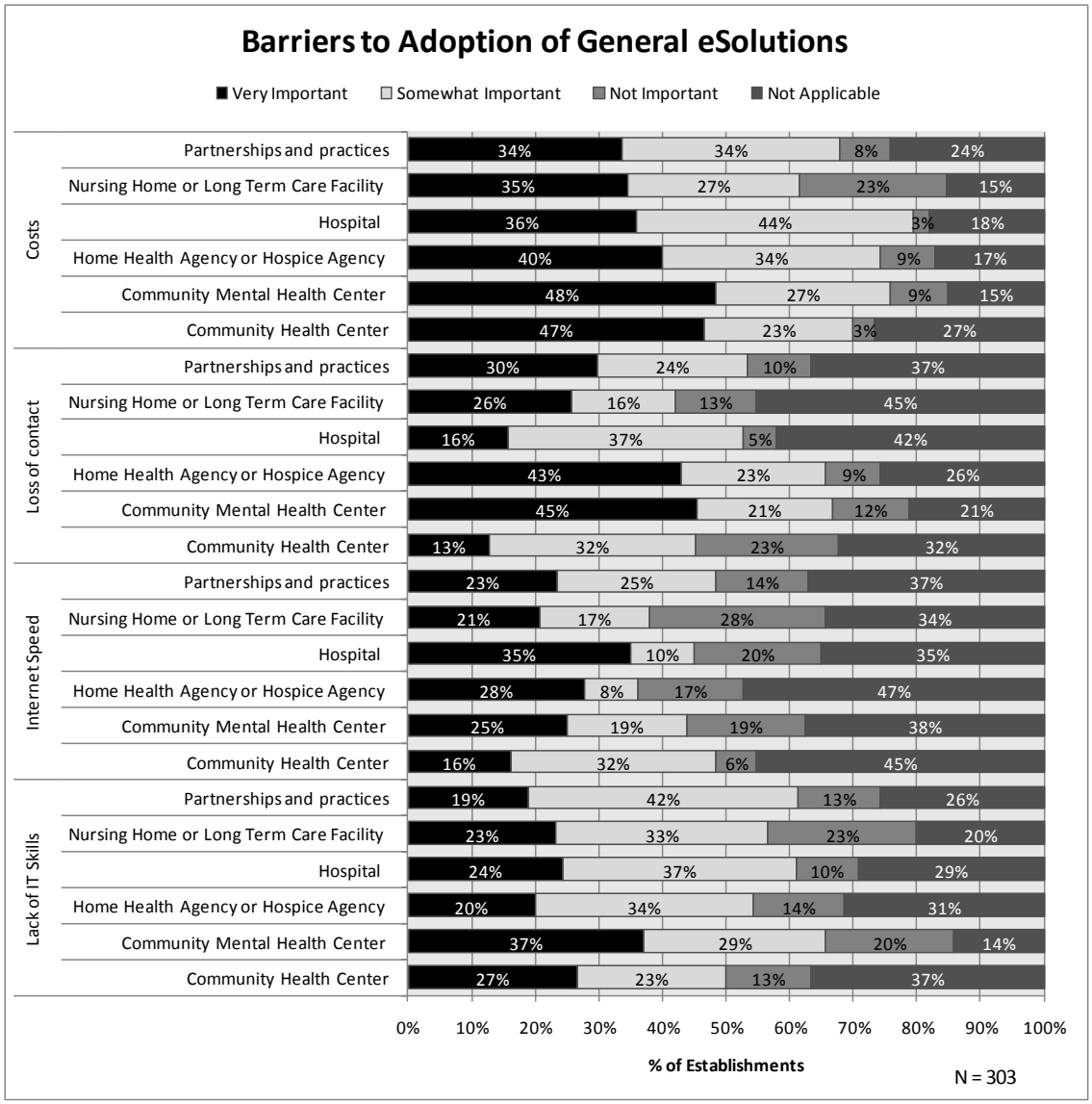


Figure 23 - Barriers to Adoption of eSolutions by Type of Provider (2010)

Drivers of eSolutions Adoption

On the issue of issues that drive or motivate adoption, marked differences can be found between health establishments of different sizes. Large establishments find most motivating factors to be very important. Among a large percentage of single person health providers, many of these same factors were not seen to be applicable. Across all sectors, productivity and improved health outcomes were the two most frequently cited motivating factors (See **Figure 35** - Drivers of Adoption by Size of Health Provider).

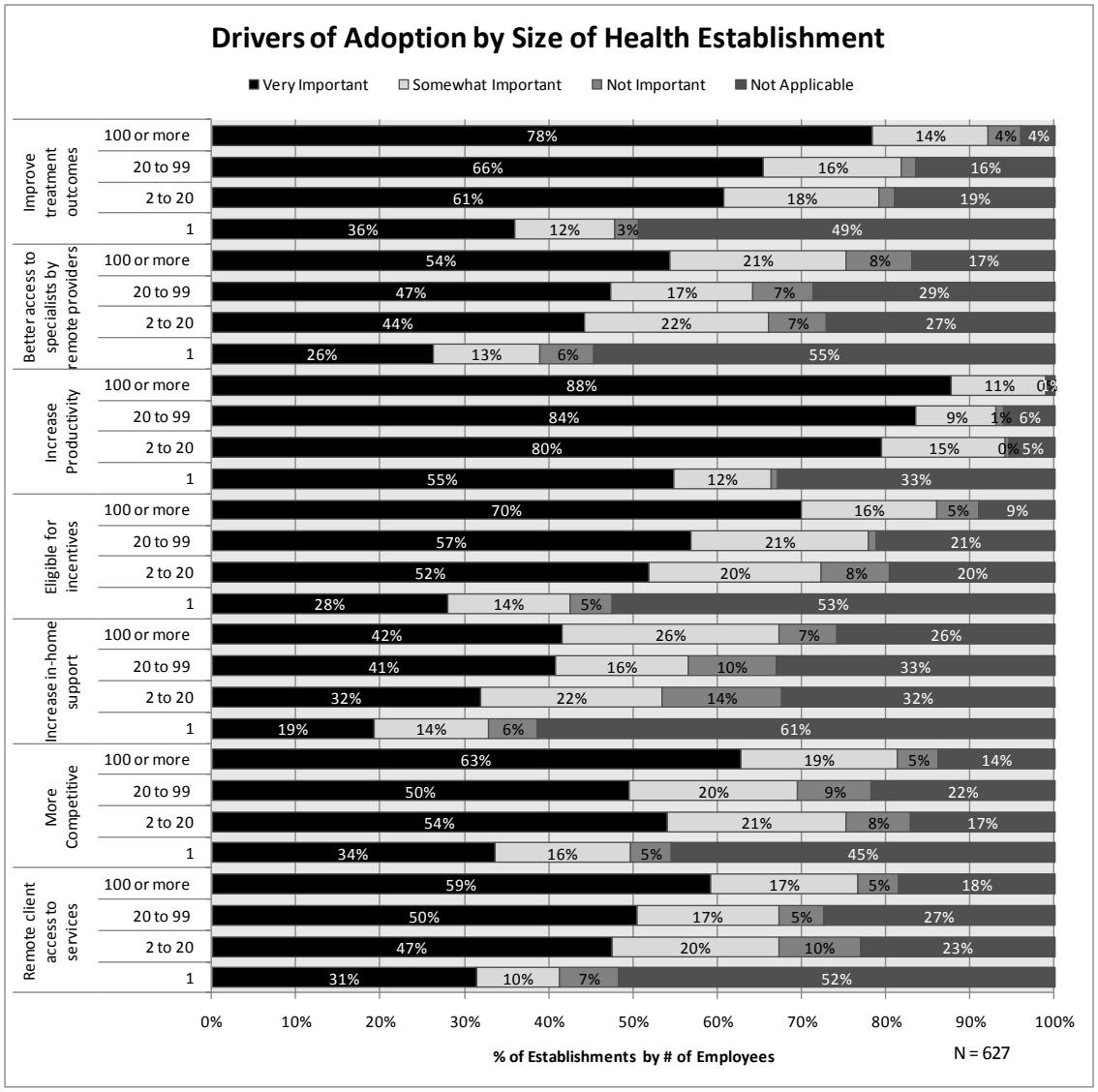


Figure 24 - Drivers of Adoption by Size of Health Provider (2010)

Household Responses

As part of an examination of the health sector, it is useful to examine responses from the household survey. Generally, current and planned use of most telehealth services by private households is low, with only 8 percent and 18 percent of households using or planning to use six of the seven telehealth services. Use of the Internet to research personal health issues was the one area where current use is at 41 percent. Nevertheless, it is very notable that respondents' willingness to explore telehealth services was high at 53 percent to 68 percent. This would indicate that there is a lot of potential for telehealth services (See **Figure 36** - Use of Home Based TeleHealth).

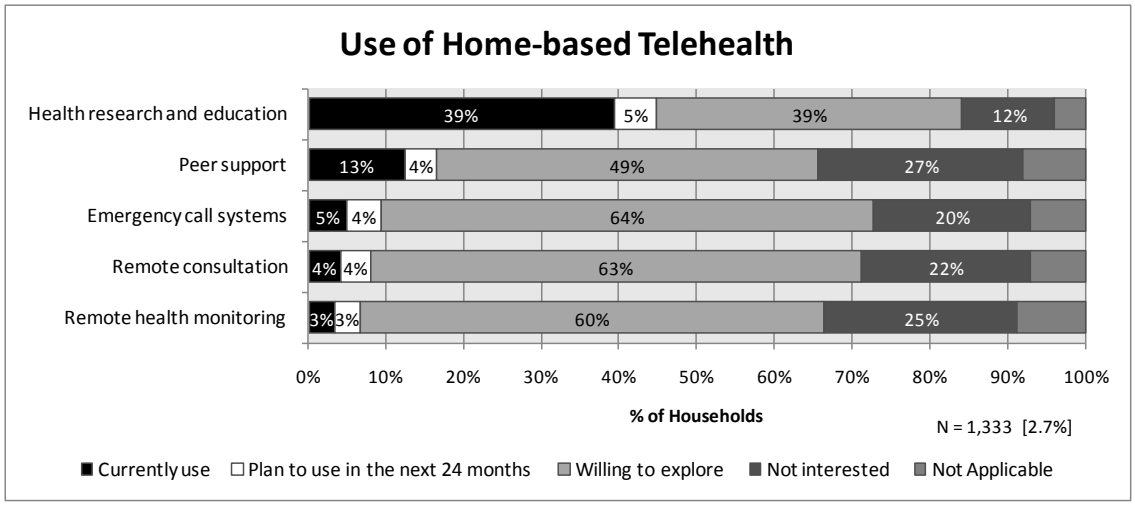


Figure 25 - Use of Home Based TeleHealth (2010)

A second health related question was limited to private households that had received one or more types of telehealth services in their home. When asked about their level of satisfaction, only 3-9 percent expressed any level of dissatisfaction. Depending on the type of telehealth service, between 55 percent and 69 percent of household respondents indicated that they were either “very satisfied “or “satisfied” with their experience (See **Figure 37** - Household Satisfaction with Current Health Services).

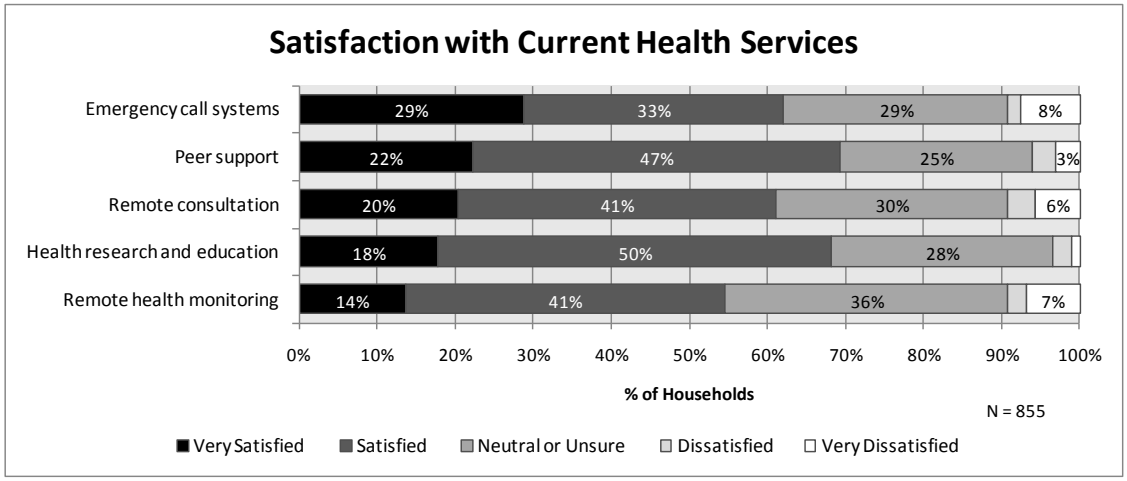


Figure 26 - Household Satisfaction with Current Health Services (2010)

Respondents were asked to identify what could motivate them to utilize telehealth services. Responses included:

- Reduced costs and financial burden;
- Improved quality of support or health service;
- Speed of assistance response;

- Access to services not available locally;
- Reduced travel for health services; and,
- Increased control over the service experience.

A clear majority (between 73 percent and 77 percent) said that all of these factors would be either very important or somewhat important in motivating them to use telehealth services (See **Figure 38** - Household Motivations for using Telehealth Services)

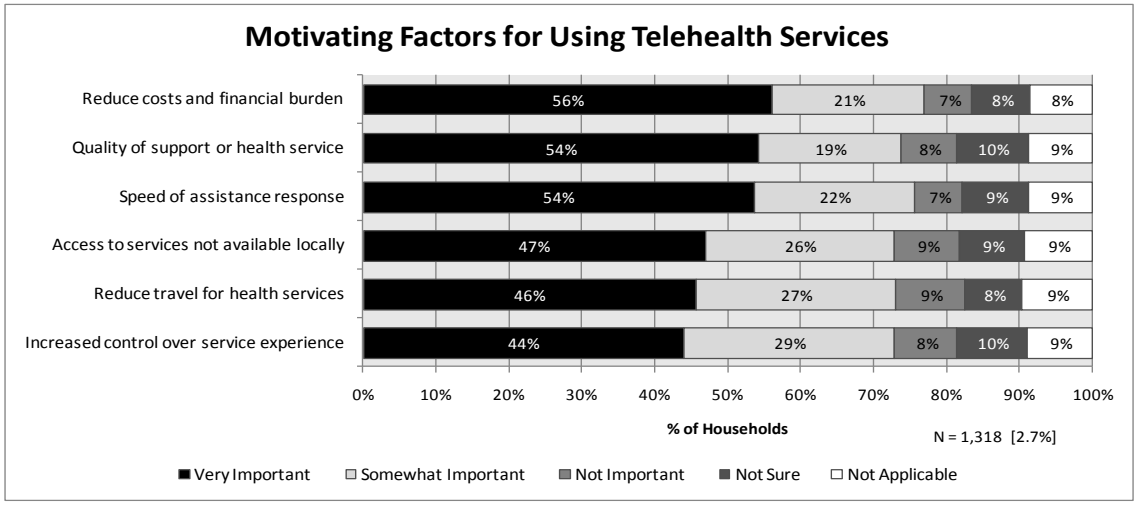


Figure 27 - Household Motivations for using Telehealth Services (2010)

As for barriers to utilizing telehealth services, there was significant difference between how important different factors were rated. Consistent with other findings, privacy and security were the largest concern (cited by 58 percent as a very important barrier), followed by slow or unreliable Internet (51 percent) and uncertainty over the quality of telehealth services (36 percent). Far less important were lack of technical skills (17 percent) or discomfort with the technology (12 percent). This information should be valuable in designing adoption strategies for home based telehealth services (See **Figure 39** - Household Barriers to using Telehealth Services).

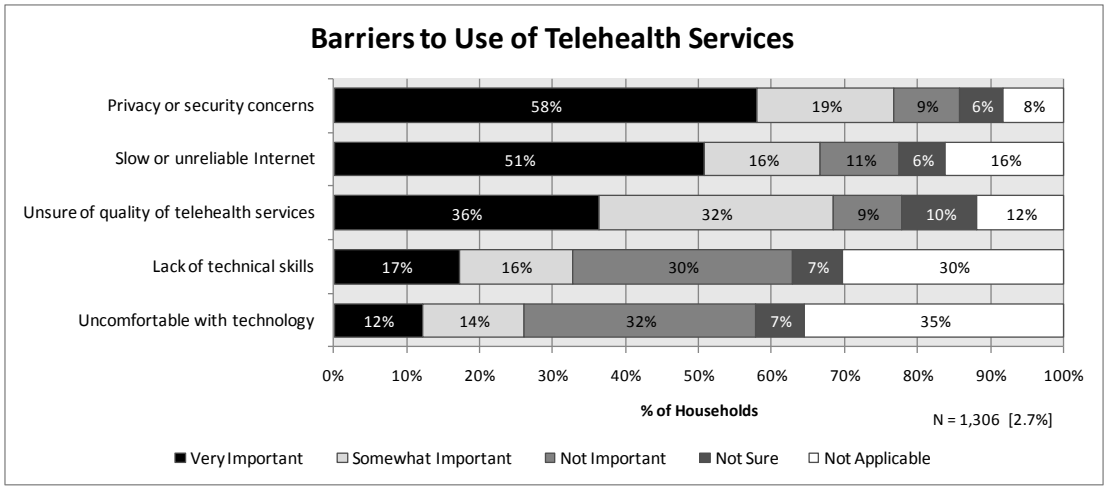


Figure 28 - Household Barriers to using Telehealth Services (2010)

Broadband Internet Infrastructure

Limited high-speed broadband access in eastern and western sections of the State has been a significant concern. In 1980, the North Carolina General Assembly incubated the Microelectronics Center of North Carolina (MCNC) as a non-profit organization to address this access issue for many of the rural parts of the State. One of MCNC's main activities is the operation of the North Carolina Research and Education Network (NCREN). NCREN provides broadband communications technology services and support to all 115 K-12 school districts, 20 of 58 North Carolina Community Colleges, all University of North Carolina system institutions, 24 of 36 North Carolina private colleges and universities and public health facilities across the State.

On January 20, 2010, the NTIA announced that the MCNC had been awarded $28.2M via the Broadband Technology Opportunities Program (BTOP) for infrastructure. These middle-mile broadband recovery funds are the BTOP Round 1. MCNC's funded proposal included the construction of 500 new miles of fiber in 37 counties in the rural southeastern and western parts of the State. The main goal of this fiber build was to offer virtually unlimited amounts of bandwidth to the public education institutions served by NCREN at stable costs for the next two decades, even though demand for bandwidth among these institutions is growing at 30-40 percent annually. [1]

Because of its success in Round 1, MCNC submitted its application on March 26, 2010, for Round 2 BTOP funding for a middle-mile fiber build in the following regions: Northeastern, North Central, Northwest and South Central North Carolina. MCNC again partnered with private sector providers, Education and Research Consortium of the Western Carolina (ERC) Broadband and Balsam West to assist with this application. MCNC also worked with the Frank Hawkins Kenan Institute at UNC-Chapel Hill and the UNC School of Government as research partners in this effort. [1]

If Round 2 is funded, this middle mile will serve public education institutions in the partner counties. Also, Round 2 rule changes will enable MCNC to build direct fiber to other counties and municipal institutions—including bringing high-performance broadband to healthcare providers. To take advantage of improvements in broadband access, the North Carolina Hospital Association (NCHA) has taken a leadership position. NCHA has partnered with the North Carolina TeleHealth Network (NCTN) to create a private statewide broadband network

of healthcare providers to meet the growing bandwidth needs that will result from EHR adoption and Health Information Exchange (HIE) activities. The hospital phase of the project is known as NCTN-H and will provide an 85 percent discount for public and not-for-profit hospitals; other hospitals will be able to leverage a volume discount and join the network as well. Currently, 85 percent of NC-licensed hospitals and 76 percent of all NC hospitals are registered and eligible to participate in the NCTN offering.

Details of MCNC's Round 2 application were released in April 2010. Since then the NTIA has been processing the application and the State is still in competition. The State will address another round of due diligence questions for further federal analysis. A Round 2 grant in the amount of $75 million was announced and awarded to MCNC.

MCNC's North Carolina Rural Broadband Initiative project proposes to extend the benefits of its $28.2M BTOP Round 1 award to deploy infrastructure in eastern and western North Carolina by constructing more than 1,300 miles of fiber infrastructure to community colleges, libraries, schools, health and public safety facilities, and other CAIs in 69 of the most economically disadvantaged rural counties, primarily along the northern and southern borders of North Carolina. The project proposes to build out a 100 Gbps middle-mile network with a 3 Mbps wireless component to support eLearning and advanced statewide research initiatives, improvements in public health and electronic medical records, and improved network connectivity for existing network infrastructure, as well as access to high-speed educational networks.

Appendix 6 - NC-MIPS Portal 2.0 Screenshots

The following are screenshots as a provider would see them as they attest on the NC-MIPS Portal. The screenshots have been updated to reflect the Stage 1 changes per the Stage 2 Final Rule. Please note, not all screenshots from the NC-MIPS Portal have been included in the SMHP.

Figure 29 - NC-MIPS Portal Welcome Screenshot

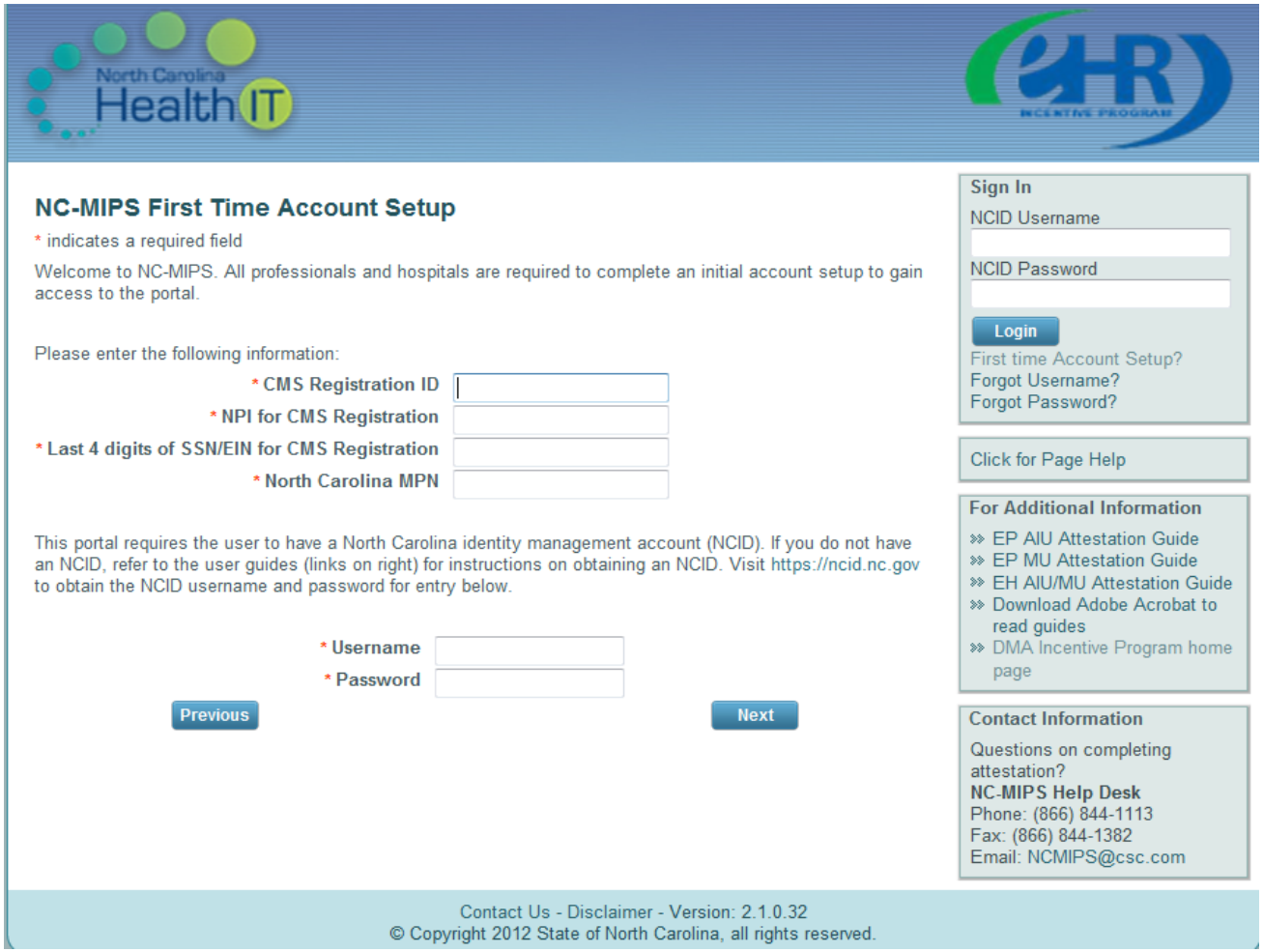


Figure 30 - NC-MIPS First Time Account Set-Up Screenshot

Figure 31 - Status Screenshot

Figure 32 - Demographics Screenshot

Figure 33 - Practice Predominantly/Hospital Based Screenshot

Figure 34 - Practice Predominantly/Hospital-Based Screenshot (2)

Figure 35 - AIU/MU Screenshot

Figure 36 - Measure Selection Home Page Screenshot

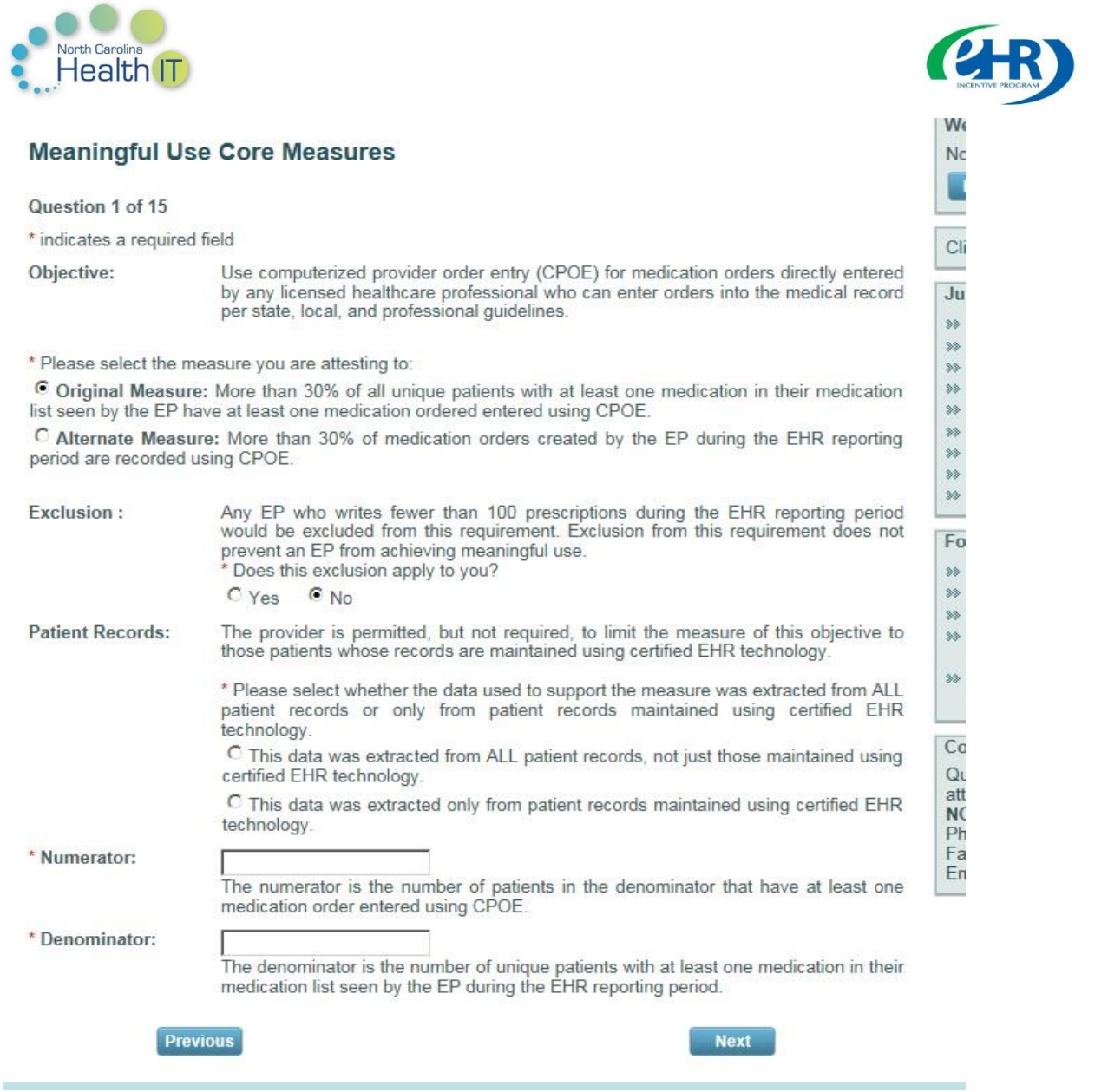


Figure 37 - MU Core Measure 1_Original Measure

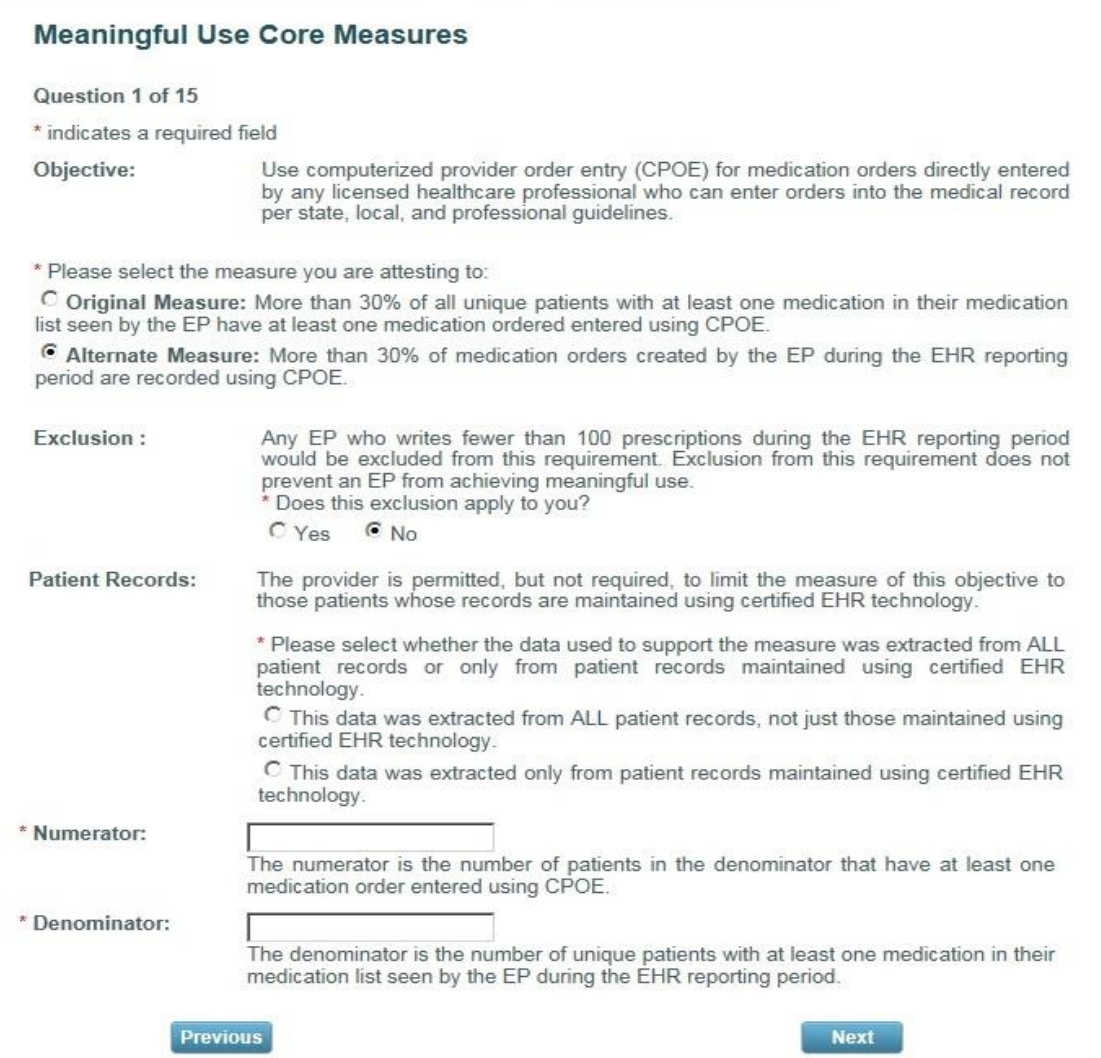


Figure 38 - MU Core Measure_Alternate Measure

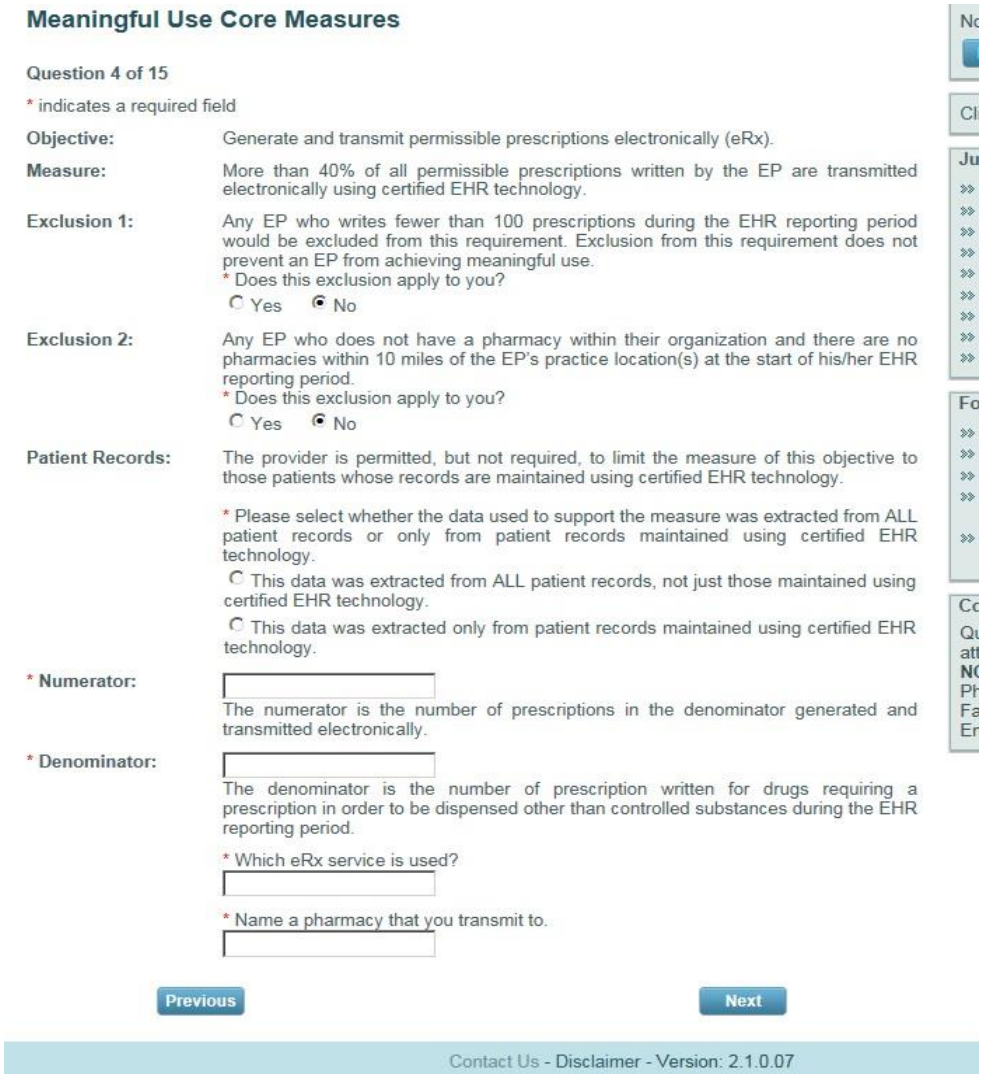


Figure 39 - MU Core Measure 4

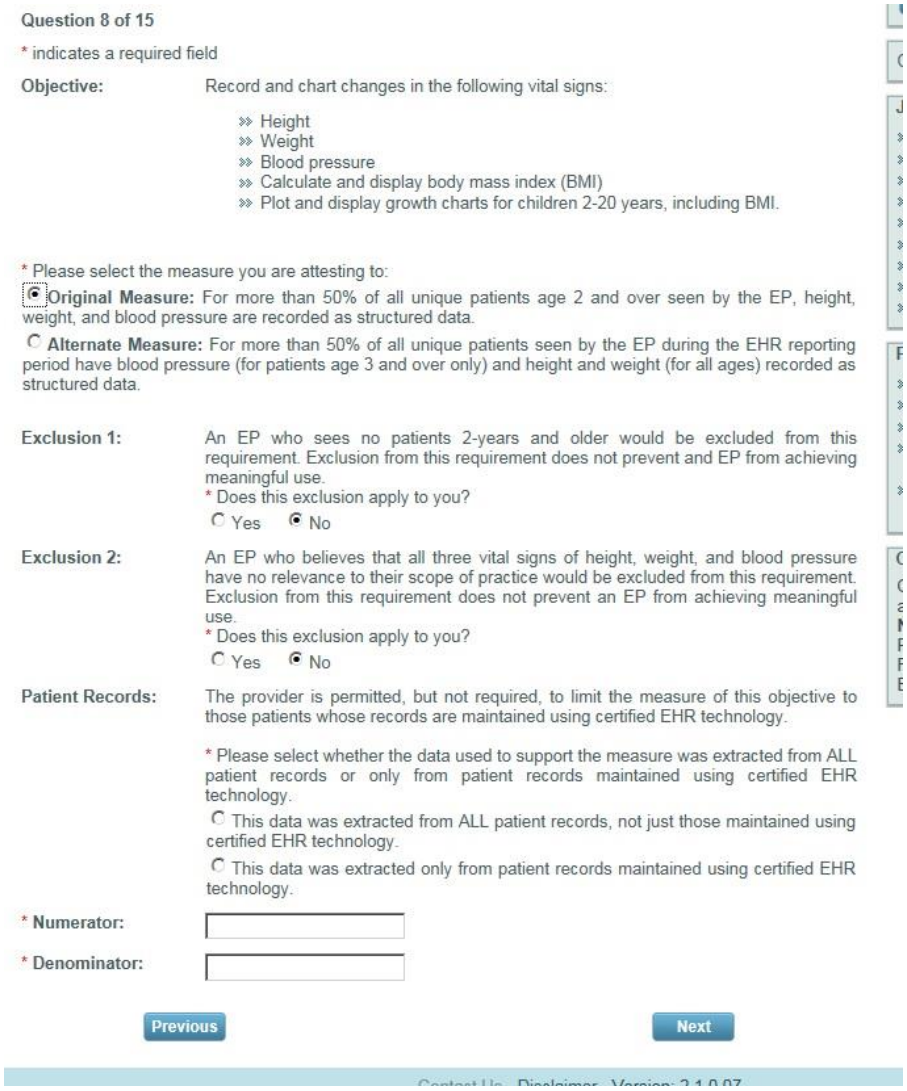


Figure 40 - MU Core Measure 8_Original Measure

Figure 41 - MU Core Measure 8_Alternate Measure

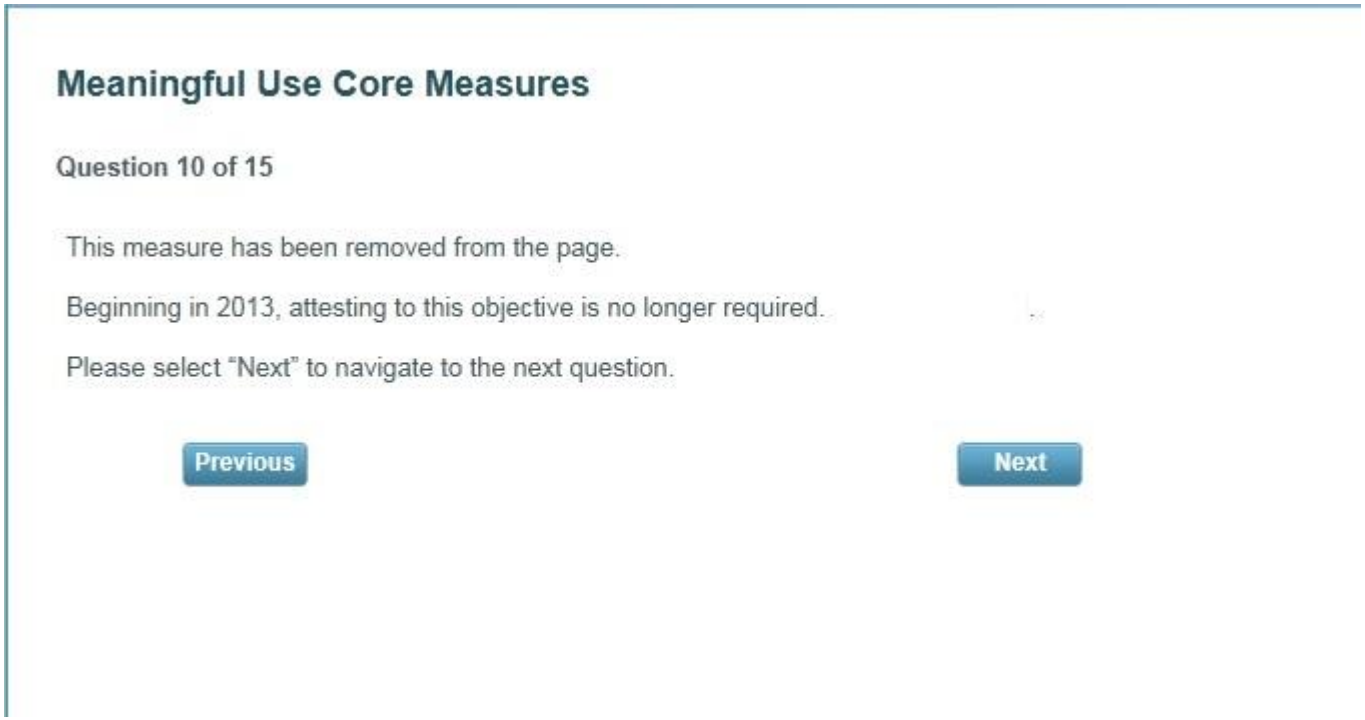


Figure 42 - MU Core Measure 10

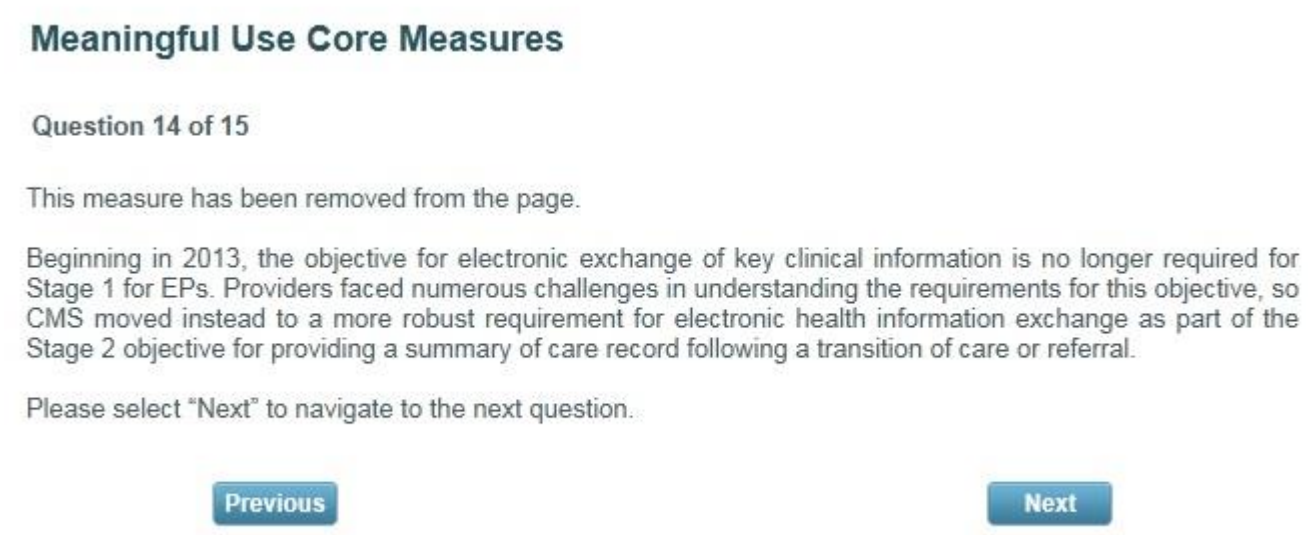


Figure 43 - MU Core Measure 14

Figure 44 - Example of a Meaningful Use Measure Screen

Meaningful Use Menu Measure Instructions

EPs must report on a total of five (5) MU menu measures, one of which must be a public health measure. Currently, the North Carolina Division of Public Health is neither able to accept electronic submission of immunization data nor syndromic surveillance data from EPs; therefore, an exclusion may be claimed for either of these public health measures. To successfully report on a public health measure, you must enter an exclusion response in the measure reporting space. CMS encourages EPs to select menu measures that are relevant to their scope of practice and to claim an exclusion for a menu measure only in cases where there are no remaining menu measures for which they qualify or if there are no remaining menu measures that are relevant to their scope of practice.

Public Health Menu Measures

Selection	Objective
☐	Capability to submit electronic syndromic surveillance data to public health agencies and an actual submission except where prohibited and in accordance with applicable law and practice.
☐	Capability to submit electronic syndromic surveillance data to public health agencies and an actual submission in accordance with applicable law and practice.

If an EP claims an exclusion for one of the public health measures above, the EP must select four of the remaining MU menu measures. If an EP claims an exclusion for both of the public health measures above, the EP must select three of the remaining MU menu measures. You must select additional menu measures until a total of five MU menu measure objectives have been selected, even if exclusions apply.

Additional Menu Measures

Selection	Objective
☐	Implement drug formulary checks.
☐	Incorporate clinical lab-test results into EHR as structured data.
☐	Generate lists of patients by specific condition to use for quality improvement, reduction of disparities, research or outreach.
☐	Send reminders to patients per patient preference for preventative/ follow-up care.
☐	Provide patients with timely electronic access to their health information (including lab results, problem list, medication lists, and allergies) within four business days of the information being available to the EP.
☐	Use certified EHR technology to identify patient-specific education resources and provide those resources to the patient if appropriate.
☐	The EP who receives a patient from another setting of care or provider of care or believes an encounter is relevant should perform medication reconciliation.
☐	The EP who transitions their patient to another setting of care or provider of care or refers their patient to another provider of care should provide summary care record for each transition of care or referral.

Previous Next

Figure 45 - Menu Measure Instructions Screenshot

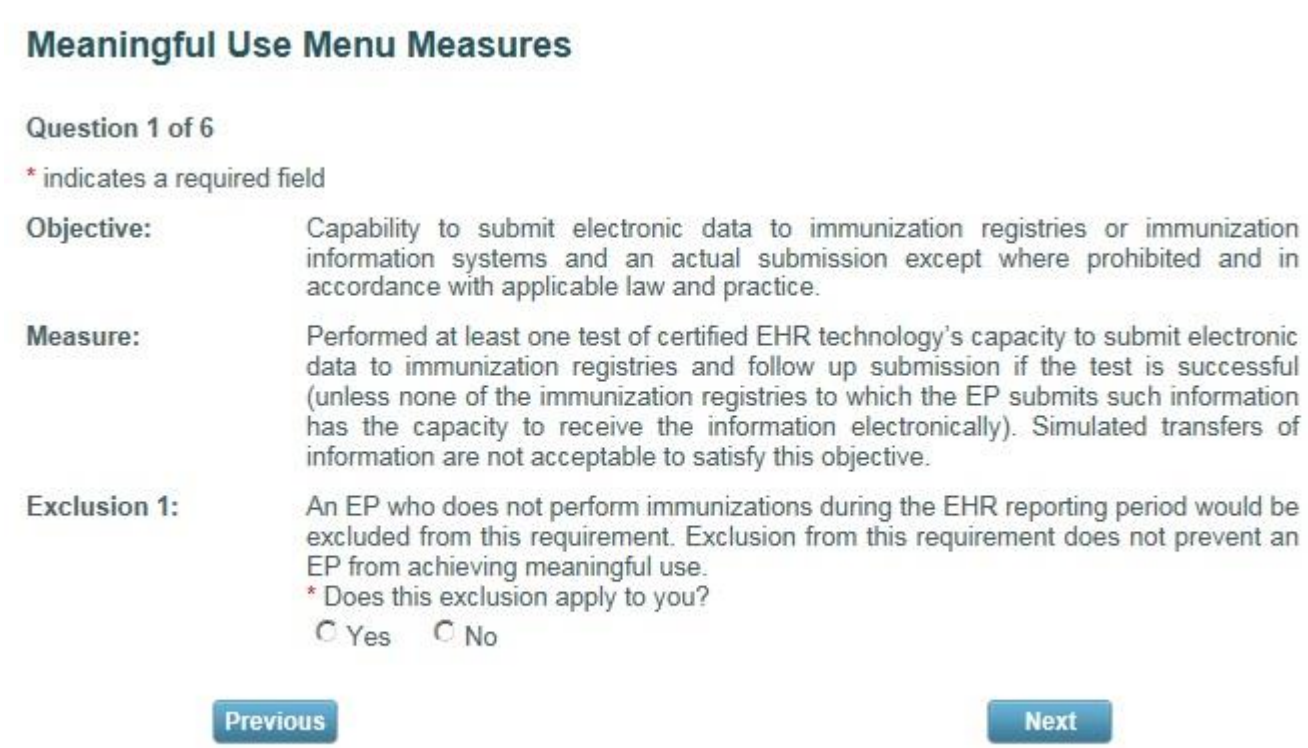


Figure 46 - MU Menu Measure 1

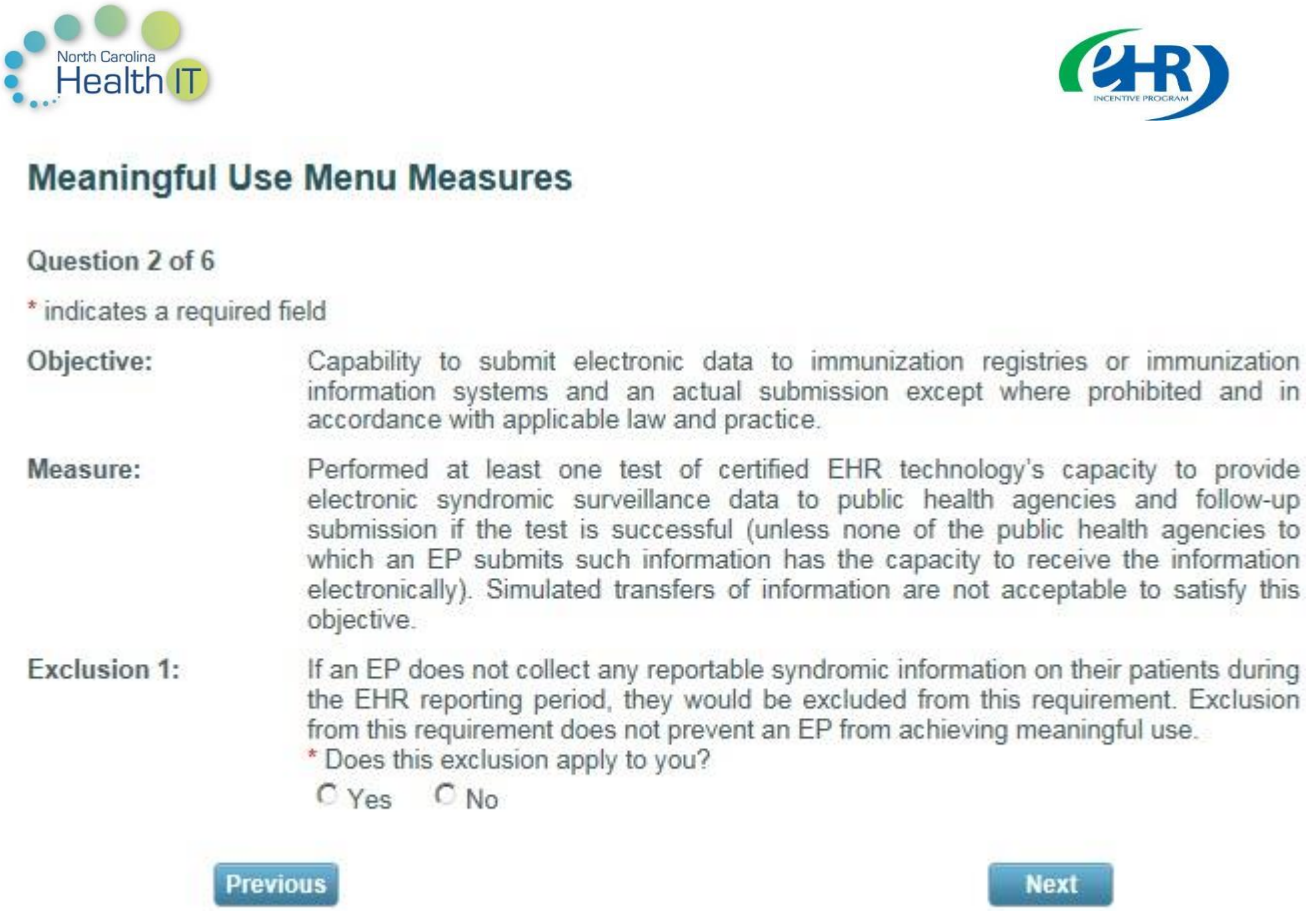


Figure 47 - MU Menu Measure 2

Figure 48 - Menu Measure Summary Screenshot

Figure 49 - Electronic Submission Screenshot

Figure 50 - Print, Sign, Send Screenshot

Appendix 7 - Meaningful Use Objectives

Note: The measures displaying a strikethrough are no longer required as of program year 2013.

Eligible Professionals – 15 Core Objectives

1. Computerized provider order entry (CPOE)
2. E-Prescribing (eRx)
3. ~~Report ambulatory clinical quality measures to CMS/States~~
4. Implement one clinical decision support rule
5. Provide patients with an electronic copy of their health information, upon request
6. Provide clinical summaries for patients for each office visit
7. Drug-drug and drug-allergy interaction checks
8. Record demographics
9. Maintain an up-to-date problem list of current and active diagnoses
10. Maintain active medication list
11. Maintain active medication allergy list
12. Record and chart changes in vital signs
13. Record smoking status for patients 13 years or older
14. ~~Capability to exchange key clinical information among providers of care and patient-authorized entities electronically~~
15. Protect electronic health information

Menu objectives – may defer 5 of 10

Eligible Professionals – 10 Menu Objectives

1. Drug-formulary checks
2. Incorporate clinical lab test results as structured data
3. Generate lists of patients by specific conditions
4. Send reminders to patients per patient preference for preventive/follow up care
5. Provide patients with timely electronic access to their health information
6. Use certified EHR technology to identify patient-specific education resources and provide to patient, if appropriate
7. Medication reconciliation
8. Summary of care record for each transition of care/referrals
9. Capability to submit electronic data to immunization registries/systems*
10. Capability to provide electronic syndromic surveillance data to public health agencies*

* At least 1 public health objective must be selected.

Additional Set CQM– EPs must complete 3 of 38

1. Diabetes: Hemoglobin A1c Poor Control
2. Diabetes: Low Density Lipoprotein (LDL) Management and Control
3. Diabetes: Blood Pressure Management
4. Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)
5. Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)
6. Pneumonia Vaccination Status for Older Adults
7. Breast Cancer Screening
8. Colorectal Cancer Screening
9. Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD
10. Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)
11. Anti-depressant medication management: (a) Effective Acute Phase Treatment, (b)Effective Continuation Phase Treatment
12. Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation
13. Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy
14. Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care
15. Asthma Pharmacologic Therapy
16. Asthma Assessment
17. Appropriate Testing for Children with Pharyngitis
18. Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer
19. Oncology Colon Cancer: Chemotherapy for Stage III Colon Cancer Patients

Additional Set CQM– EPs must complete 3 of 38 (cont.)

19. Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low Risk Prostate Cancer Patients
20. Smoking and Tobacco Use Cessation, Medical Assistance: a) Advising Smokers and Tobacco Users to Quit, b) Discussing Smoking and Tobacco Use Cessation Medications, c) Discussing Smoking and Tobacco Use Cessation Strategies
21. Diabetes: Eye Exam
22. Diabetes: Urine Screening
24. Diabetes: Foot Exam
25. Coronary Artery Disease (CAD): Drug Therapy for Lowering LDL-Cholesterol
26. Heart Failure (HF): Warfarin Therapy Patients with Atrial Fibrillation
27. Ischemic Vascular Disease (IVD): Blood Pressure Management
28. Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic
29. Initiation and Engagement of Alcohol and Other Drug Dependence Treatment: a) Initiation, b) Engagement
30. Prenatal Care: Screening for Human Immunodeficiency Virus (HIV)
31. Prenatal Care: Anti-D Immune Globulin
32. Controlling High Blood Pressure
33. Cervical Cancer Screening
34. Chlamydia Screening for Women
35. Use of Appropriate Medications for Asthma
36. Low Back Pain: Use of Imaging Studies
37. Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control
38. Diabetes: Hemoglobin A1c Control (<8.0%)

Note: the number 19 is used twice but there is no #23 (this is an error from CMS)

Appendix 8 – Patient Volume Methodology Provider Guidance

Group Methodology for Patient Volume Reporting

'**Group**' means one or more eligible professionals practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization.

At a single location...

Dr. Jones

Dr. Jones works here

Raleigh location of ABC Healthcare

If Dr. Jones chooses group methodology and defines the group as a single practice location (the Raleigh location of ABC Healthcare), she must attest using the encounters from EVERY professional (eligible professionals such as MDs and non-eligible professionals such as RNs, phlebotomists, etc.) at this location who provided services within the group's consecutive 90-day reporting period from the prior year.

In other words, if an eligible professional defines the group as a single practice location, every professional's encounters at that location must be accounted for when calculating patient volume.

Please note, so long as a new provider has an 'appropriate' current affiliation with a practice, they do not need to have been with the group during the group's selected reporting period to attest using group methodology.

Figure 51 - Group Method - One Location

Group Methodology for Patient Volume Reporting

'**Group**' means one or more eligible professionals practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization.

At several practice locations in the same town, city, region or part of the state...

If Dr. Jones chooses group methodology and defines the group so that it consists of the practice locations within a logical geographical region (the Triangle Region), she must attest using the encounters from EVERY professional (eligible professionals such as MDs and non-eligible professionals such as RNs, phlebotomists, etc.) at the locations within her defined region who provided services the group's chosen consecutive 90-day reporting period from the prior year. Please note, EPs are required to report on at least one location with certified EHR technology.

In other words, if an eligible professional defines the group so that it consists of the practices within a logical geographical region, every professional's encounters within the practice locations in this region must be accounted for when calculating patient volume.

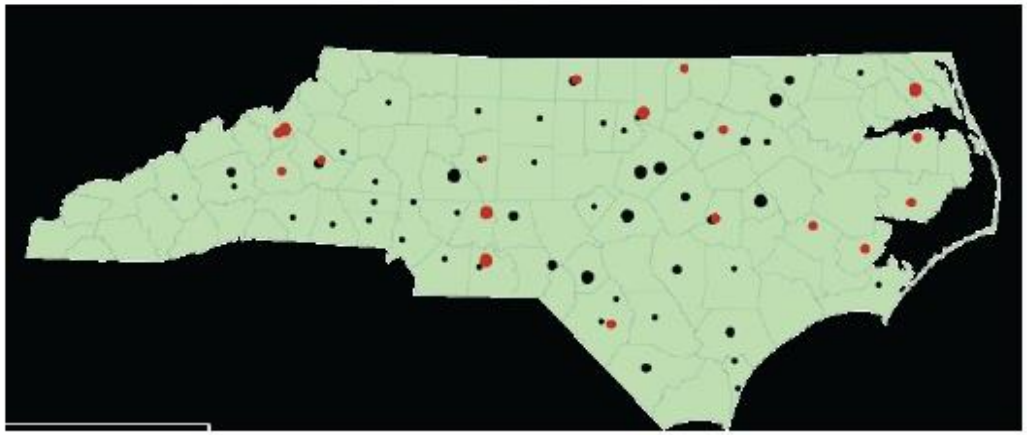
Please note, so long as a new provider has an 'appropriate' current affiliation with a practice, they do not need to have been with the group during the group's selected reporting period to attest using group methodology.

Figure 52 - Group Method - Same Region

Group Methodology for Patient Volume Reporting

'**Group**' means one or more eligible professionals practicing together at one practice location or at multiple practice locations within a logical geographical region under the same healthcare organization.

A state-wide organization...



If Dr. Jones chooses group methodology and defines the group so that it includes all practice locations of ABC Healthcare across the state, she must attest using the encounters from EVERY professional (eligible professionals such as MDs and non-eligible professionals such as RNs, phlebotomists, etc.) at all practice locations across the state who provided services within the groups' chosen consecutive 90-day reporting period from the prior year. Please note, EPs are required to report on at least one location with certified EHR technology.

In other words, if an eligible professional defines the group as including every practice location in the state, every professional's encounters within every practice in the state must be accounted for when calculating patient volume.

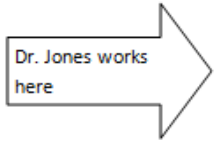
Please note, so long as a new provider has an 'appropriate' current affiliation with a practice, they do not need to have been with the group during the group's selected reporting period to attest using group methodology.

Figure 53 - Group Method - Statewide

Individual Methodology for Patient Volume Reporting

At a single location...

Dr. Jones



Raleigh location of ABC Healthcare

Dr. Jones has two options for reporting Patient Volume using individual methodology for a single location:

1. She can report the number of encounters she (and she alone) has had in a consecutive 90-day period from the prior year; or,
2. She can report the number of patient encounters that she has had, **and** the patient encounters of staff she directly supervises, during the same consecutive 90-day period from the prior year.

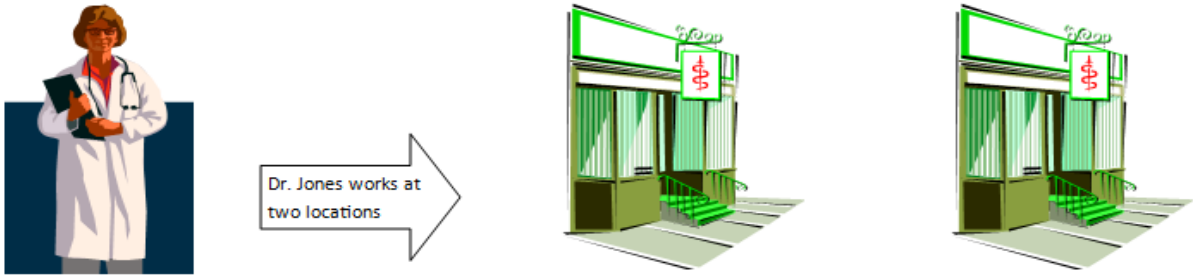
In other words, if Dr. Jones supervises any staff, such as X-Ray Technicians, Registered Nurses, Lab Technicians, etc., she can count their total patient encounters toward meeting her patient volume threshold.

Regardless of the encounters Dr. Jones chooses to count toward Patient Volume, she will need to be consistent in applying the encounters in both the numerator and denominator.

Figure 54 - Individual Method - One Location

Individual Methodology for Patient Volume Reporting

At more than one location...



Dr. Jones | **Raleigh location of ABC Healthcare** | **Durham location of ABC Healthcare**

Dr. Jones may use encounters from multiple locations, but is not required to report on more than one location, but it is required to report on at least one location with certified EHR technology. She has two options for reporting patient volume from either or both locations using individual methodology for multiple locations:

1. She can report the number of encounters she (and she alone) has had in a consecutive 90-day period from the prior year; or,
2. She can report the number of patient encounters that she has had, **and** the patient encounters of staff she directly supervises, during the same consecutive 90-day period from the prior year.

In other words, if Dr. Jones supervises any staff, such as X-Ray Technicians, Registered Nurses, Lab Technicians, etc., she can count their total patient encounters toward meeting her patient volume threshold. Please note, EPs are required to report on at least one location with certified EHR technology.

Regardless of the encounters Dr. Jones chooses to count toward patient volume, she will need to be consistent in applying the encounters in both the numerator and denominator.

Figure 55 - Individual Method - Multiple Locations

Appendix 9 - CMS Comments Addressed

The following is provided in response to the December 11, 2012 CMS conditional approval letter.

SMHP Ver. 2.0 Page#	CMS Comment	Description/Response/Clarification
Current Version - Page 13	This section indicates that a survey was conducted in 2011 but also that information is current as of September 2010 for Medicaid providers which are contradictory. CMS requests provision of specificity about the types of EHRs in use by the state's providers.	That was misinformation and has been corrected to reflect the survey being conducted in 2010. This change can be found in section A.1.1.
Current Version - Page 31	Page 18 (Table 8):a. According to Table 8, STOP grants receives $143.8 million. It is understood that the aim is to influence adoption of broadband-enabled applications and uses but if "email invitation were sent to over 74,000 organizations and 29,000 households across the state." How does State ascertain how many do not have broadband access? For instance, were any paper surveys sent? Is State considering Section AS-9 in SMHP the same as A15 in SMHP checklist (Broadband grants)? There appear to be qualitative evidence of relatively low levels of adoption and limited evidence of growth, but no quantification for the 48 percent of respondents (i.e., statistics not included)	A description of the survey methods account for the discrepancy in numbers, and can be found in Table 10 on page 31.

SMHP Ver. 2.0 Page#	CMS Comment	Description/Response/Clarification
Current Section – A.1.1 – page 13	Health Resources Services Administration (HRSA) was not specifically mentioned but various funding itemized. This was referenced on Page 24 (previous version): Makes references to updating the audit strategy in Spring of 2012 and since this SMHP was submitted in summer, an update would be appreciated. Where did State get the "3 claims per hour" estimate from? If "As of December 2011, roughly 807 of those 1,889 EPs had at least begun the attestation process with NC Medicaid" if no follow up surveys were conducted in 2011, where did they get numbers from?	The date was changed to reflect the survey was conducted in 2010, so the numbers here refer to the 2010 survey. In speaking with those who validate provider claims, the estimated 3 claims per hour was provided. An updated audit strategy has been submitted in this version of the SMHP.
Current Section A.7-A.7.2 - page 55-59	Page 44: A very detailed narrative covering the governance structure was provides but the narrative about Geographic reach is somewhat lacking in detail.	A revised section of the NC HIE has been provided and can be found in Sections A.7-A.7.2 on pages 55-59.
Current Section B.6	Page 47: The state indicated that "part of the challenge for the HIT/E Project will be the ability to make modifications to the Replacement MMIS design prior to MMIS go-live to support the HIT/E environment" so it is uncertain if HIT/E-MMIS coordination exists. For MITA-MMIS transition plans, appropriate coordination was indicated.	HIT/HIE MMIS coordination discussed further in Section B.6 on page 99.
Current Section A.14 - page 73	Page 58: Vital records system integration needs to be addressed in further update to SMHP	A further detailed explanation of the Vital Record system integration has been provided

SMHP Ver. 2.0 Page#	CMS Comment	Description/Response/Clarification
Current Section A.14 - Page 73	Page 59: Narrative indicates that planned/progress of EDSS from provider labs, Health Departments, hospital labs, etc., is limited by state capacity and resources so it is a little unclear what the level of interoperability is. Did testing of system occur in January of 2012 as anticipated? There is no indication of this testing happening especially as the SMHP was submitted about 7 months later.	Described in Section A.14, found on page 72.
Current Section: C.2.2 Page 112	Page 61: "Current State & Gap Analysis" is indicated on page 83 but no percentages (as a portion of total) provided on either page. Has NC HIE begun to secure exchange of patient information between and among participating entities through the HIE Network during first quarter of 2012 (according to plan)?	The NCHIE information requested has since been provided within the Current State & Gap Analysis in Section C.2.2.5 on page 112.
Current Section B.2.1 - page 77	Page 63: Though more some pertinent information can be found on page 73 of 182, what is found in this section of the SMHP relates only to "Statewide HIE Technical Approach"	Per the N3CN and NC HIE merger, this section has revamped and can be found in Section B.2.1 on page 77.
Current Section B.6 - page 99	Page 73: The narrative specifies administration and informatics but not much about implementation	Implementation is further discussed in Section B.6 on page 99.
Current Section E	Page 78: The narrative mentions current structure but no mention of future (5 year structure)	The program's 5-year timeline projections are provided within section E which begins on page 199.
Currently - Appendix 6 on page 229	Appendix 4: 5 sample screen shots were contained in this section & one is probably not approvable (i.e. The status screenshot had references to "NLR")	Updated screenshots of NC-MIPS Portal 2.0 (which were CMS-approved) have been provided and can all be found in Appendix 6 on page 229.

Appendix 10 - Previous Version Control

Date	Section(s) updated	Page numbers	Nature of Change
Previous Version Control - Version 2.1			
August 2012	C.3.1	84	Added note re: extension of tail period for payment year 2012 and beyond
August 2012	C.3.5-C.3.6	88	Reworded text to more accurately describe the EH MU attestation process/timeline
August 2012	C.5.2	103	Removal of reference to net average allowable cost, per CMS direction
August 2012	C.5.3	103-104	Reworded text to indicate that an EH's first payment year could be AIU, not solely MU, per CMS direction Added note re: extension of tail period for payment year 2012 and beyond
August 2012	C.6	121-124	Appeals process reworded to better describe EHR Incentive Program appeals within the context of current DMA appeals processes
August 2012	D	125-143	Detailed audit strategy inserted
Previous Version Control - Version 2.0			
January 2012	C.1.2	81	New section
January 2012	C.1, C.2.2.1, C.2.2.4, C.3, C.4.3	85-87, 98	Section titles changed
January 2012	C.1-C.2.2.4	77-82	Revised with updated information
January 2012	C.2.3-C.5.4.3	82-114	Revised with updated information
January 2012	C.7	N/A	Combined with sections A.1.2 and C.1

Date	Section(s) updated	Page numbers	Nature of Change
January 2012	D	119	Revised with updated information
January 2012	E	125-127	Revised with updated information
January 2012	Appendix 2	130	New section
January 2012	Appendix 5	145-152	New acronyms added
January 2012	Acronyms	145-152	Moved to Appendix 5
January 2012	Previous Version Control	153-160	Previous Version Control moved to Appendix 6

Previous Version Control - Version 1.3

Date	Section updated	Page numbers	Nature of Change
November 2011	Entire document	All	Removed line numbers.
November 2011	A.7.1	52-53	Updated section on NC HIE to better reflect the existing structure of the organization.
November 2011	B.2	72-85	Updated section to better reflect the plans of NC HIE.
November 2011	C.4.4	106	Updated section on the payment mechanism to reflect actual method being used.
November 2011	C.5.3	108-114	Updated section on the hospital calculation to make it easier to understand.

Date	Section updated	Page numbers	Nature of Change
November 2011	C.6	116-119	Updated section to reflect existing appeals process.

Appendix 11 – Past SMHP CMS Comments Addressed (2011-2012)

The following is provided in response to the December 27, 2010 CMS conditional approval.

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
49	Enclosure A, Item 1 Please provide a diagram of any management structure created per the SL 2009-0451 of the NC General Assembly	Jan., 2011	Clarification added in Jan., 2011, Ver. 1.1: Pg. 52, lines 1017-1020
49	Enclosure A, Item 2 Please provide answers to the following questions concerning the management structure: a. Does the coordination between state entities include leveraging assistance from other federal programs beyond ARRA? b. What state program would be considered to leverage ARRA funds? c. Please provide further details of how the management structure is compatible with ONC and with the DMA.		Clarification added in Jan., 2011, Ver. 1.1: Pg. 59 Lines 1269-1283 Clarification added in Feb., 2011, Ver. 1.2: Item 2.a. - Pg. 52 Lines 1007 - 1009 Item 2.b. – Pg. 52 Line 1007

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
50	Enclosure A, Item 3 Does the DMA have any plans to exchange information with the CCME to assist the RECs?		Clarification added in Jan., 2011, Ver. 1.1: Page 60, lines 1309 – 1311
50-51	Enclosure A, Item 4 The role of the REC is clear, but the collaboration between the REC and the DMA is not as clear. How does the DMA plan to leverage the REC, and vice versa?		Clarification added in Jan., 2011, Ver. 1.1: Page 60, lines 1311 – 1314
57	Enclosure A, Item 5 Will the Informatics Provider Portal seek certification as a module? If not, isn't there a tension between encouraging providers' use of this tool while at the same time encouraging them to adopt and meaningfully use certified EHR technology? If yes, where is the funding coming from to support the changes necessary for certification and the actual certification fees/costs?		Clarification added in Jan., 2011, Ver. 1.1: It appears that CMS is referring to information previously shown on pages 67 and 68 instead of page 57 as indicated. Clarification added on: Page 78, lines 1951 – 1956
58-59	Enclosure A, Item 6 It was not apparently clear if the HIE models in the State are opt-in or opt-out. If opt-in, how will providers with non-participating beneficiaries maximize the HIEs for mandatory public health reporting? Page 58 notes a plan to seek a statewide opt-out approach but what happens in the interim?		Clarification added in Jan., 2011, Ver. 1.1: Page 68, lines 1584–1619 Clarification added in Feb., 2011, Ver. 1.2: Item 6 - Pg. 69 Lines 1603 - 1604

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
60	Enclosure A, Item 7 How does the State plan to fund the required interfaces for its public health reporting systems in support of MU?		Clarification added in Jan., 2011, Ver. 1.1: Page 70, Lines 1693-1696
66	Enclosure A, Item 8 Please update the SMHP to reflect the State's intention to initiate payments between Jan-March 2011, instead of the April 1st date.		Clarification added in Jan., 2011, Ver. 1.1: Page 76, Line 1842 Page 25, Lines 93, 94 Page 57, Lines 1180, 1181 Page 92, Lines 2280, 2281
73, Section C.2.2.2	Enclosure A, Item 9 Will the link to ONC also include an explanation of how a provider will obtain a certification number for the incentive program?		Clarification added in Jan., 2011, Ver. 1.1: Page 83, Line 2099-2100
73, Section C.2.2.2	Enclosure A, Item 10 Will the web site provide alerts to changes in the law or regulation?		Clarification added in Jan., 2011, Ver. 1.1: Page 83, Line 2108
73	Enclosure A, Item 11 Will the DMA use any methods such as surveys to determine if providers are reading the publications and the impact of these bulletins on provider's adoption?		Clarification added in Jan., 2011, Ver. 1.1: Page 82, Lines 2072-2074
74, C.2.3	Enclosure A, Item 12		Clarification added in Jan., 2011, Ver. 1.1:

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
	What if any additional funding and staffing will be needed for the help desk? To what extent can the DMA leverage existing help desk resources?		Page 84, Lines 2165-2171
78	Enclosure A, Item 13 Please provide additional details on how the DMA can count "patients who entered the ER on the same day as being admitted and discharged as an inpatient." Is there a claims review process in place that would determine whether in fact the patient was admitted as "inpatient"? CMS suggests DMA review the CMS FAQ on ER visits and update this section accordingly.		Clarification added in Jan., 2011, Ver. 1.1: Page 89, Lines 2241-2248
85-86	Enclosure A, Item 14 How will the SMA verify providers are properly licensed/qualified providers? If North Carolina intends to utilize Provider Portal (NC Tracks) to interface with existing Medicaid provider enrollment records for EHR Incentive Program enrollment, have the existing vulnerabilities identified in the FY 2008 Medicaid Integrity Group's Comprehensive Medicaid Program Integrity Review been adequately addressed? Have the corrective actions from the review regarding disclosures related to criminal convictions, ownership, control, relationships, and managing employees gone into effect yet? What actions were taken? How will the State ensure that existing providers have not been sanctioned or excluded since the time of their original enrollment, prior to making EHR incentive		Clarification added in Jan., 2011, Ver. 1.1: Page 97-98, Lines 2404-2417

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
	payments?		
87, C.4.5.1	Enclosure A, Item 15 The State does not need to verify the DMF status. The CMS NLR will cover this at the time of registration and pre-payment.		Clarification added in Jan., 2011, Ver. 1.1: Page 99, Lines 2467-2468
101-102, Table 18	Enclosure A, Item 16 How will providers submit documentation for review? (Can documentation be uploaded electronically to reduce the burden of the audit?)		Clarification added in Jan., 2011, Ver. 1.1: Page 114, Line 2813, Table 18
103-104	Enclosure A, Item 17 Has the State considered what might be audited pre-payment versus post-payment? Provide more information on pre-payment efforts to control fraud-in order to reduce the audit burden.		Clarification added in Jan., 2011, Ver. 1.1: Pre-payment on Page 117, Lines 2898-2904 Post-payment on Page 115, Lines 2830-2834 and Page 116, Lines 2838-2846
103, D.3	Enclosure A, Item 18 Providers must attest they have certified EHR technology, not a certified vendor. Compliance would also not be based on just having a contract, but also whether the provider has met NAA costs.		Clarification added in Jan., 2011, Ver. 1.1: Certified EHR technology on: Page 116, Line 2881 NAA costs on: Page 100-101, Lines 2528-2545
103	Enclosure A, Item 19 Please clarify what the provider must		Clarification added in Jan., 2011, Ver. 1.1:

SMHP Ver. 1.0 Page#	CMS Comment	Revision Date	Description/Response/Clarification
	attest to in bullet three: A/I/U or MU?		Page 117, Line 2884-2885
104	Enclosure A, Item 20 Does the DMA anticipate working with CMS on areas for audit, and exchanging ideas for information exchange between the two programs?		Clarification added in Jan., 2011, Ver. 1.1: Page 116, Lines 2857-2858
	Enclosure B, Item 1 General: Does the State plan to promote the benefits of EHRs to Medicaid consumers?		Clarification added in Jan., 2011, Ver. 1.1: Page 81, Lines 2007-2009
71	Enclosure B, Item 2 While the State may leverage this environmental scan for planning and outreach purposes, since the proxy values are based on several assumptions, including full-time status, CMS wants to remind the State that this calculation cannot be used to determine eligibility.		Clarification added in Jan., 2011, Ver. 1.1: Page 81, Lines 2022-2023

Appendix 12 - Pre-Payment Eligibility Verification Checklist

Explanation of Numbered Notes

(1)EP - Eligible Professional

(2)EH - Eligible Hospital

(3)American Recovery & Reinvestment Act of 2009 (Public Law 111-5); Health Information Technology for Economic & Clinical Health Act (HITECH)

(4)42 CFR Parts 412, 413, 422 and 495; Medicare and Medicaid Programs; EHR Incentive Program Final Rule.

(5)Not required of EP in IHS facilities.

(6)NC-MIPS Operations Team

(7)DMA HIT Provider Services

(8)DMA HIT Program Integrity

Practitioner Type

Eligibility Requirements	Applicability		Statute(3)	Final Rule(4)	State Verification Process and Data Elements		
	EP(1)	EH(2)			Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
1. EP or EH must be one of the permissible professional or hospital types	✓	✓	42 USC § 1396b(t)(2) (A-B)	§ 495.368 (a)(1)(i) Combating fraud and abuse	**Operations(6):** -Information on provider type from R&A matched with parallel information pulled systematically from EVC into NC-MIPS.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.2 Provider Type* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Qualifications

Eligibility Requirements	Applicability		Statute(3)	Final Rule(4)	State Verification Process and Data Elements		
	EP(1)	EH(2)			Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
2. EP or EH must be licensed to practice in the State(5)	✓	✓		§ 495.368 (a)(1)(i) Combating fraud and abuse	**Operations:** -Live license verification completed through unique search by clicking link to appropriate licensing agency website in NC-MIPS and searching provided license number.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP *Section C.3.2 Provider Type* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Qualifications							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP[1]	EH[2]	Statute[3]	Final Rule[4]	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
3. EP or EH must be a Medicaid provider in that State.	✓	✓		§ 495.304 (a) Medicaid provider scope and eligibility	**Operations:** -R&A information matched with information pulled from EVC in NC-MIPS; check for NC MPN as part of successful match. If match fails, outreach is performed to determine if any updates are required in EVC to match their CMS Registration. **PS[7]:** -MPN confirmed active through check of both MMIS and EVC (possible that they would not match).	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	This requirement is explicit in the federal rule, and will be added along with verification information to the SMHP Version 3.0.
4. EP or EH cannot be excluded, sanctioned, or otherwise deemed ineligible to receive payments from the State (e.g. already received incentive payment)	✓	✓		§ 495.368 (a)(1)(i) Combating fraud and abuse	**Operations:** -Check for any Public Actions as listed on appropriate licensing agency website; if any exist, review of consent orders and escalation to PS if necessary. **PS:** -Check EVC and FileNet Provider Disclosure Summaries to confirm no pending disclosures. -Confirm no actions on internal disclosure log preventing approval. -Check OIG to confirm no exclusions for EP/EH **or** any individual or agency associated with EP/EH that has 5% or more ownership or a managing relationship with the EP/EH. -Confirm no violations that have resulted in penalties or administrative actions against license (SB926: Provider Penalty Tracking Database). **PI[8]:** -Program Integrity case tracking database searched for evidence of current or previous cases preventing approval.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	This requirement is explicit in the federal rule, and will be added along with verification information to the SMHP Version 3.0.

Qualifications							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP[1]	EH[2]	Statute[3]	Final Rule[4]	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
					-Check is made with information available from the Medicaid Investigation Unit to determine if an action is pending that would prevent approval.		

Patient Volume							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP[1]	EH[2]	Statute[3]	Final Rule[4]	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
5. EP must have at least a 30% Medicaid patient volume (or 20% for pediatricians), unless s/he is practicing predominantly in an FQHC or RHC	✓		42 USC § 1396b(t)(2)(A)	§ 495.304(c)(1) Medicaid provider scope and eligibility	**Operations:** -EP/EH provides self-calculated numerator. DRIVE query provides numerator based on paid claims for validation. EP/EH provides denominator used for both volumes. With this information, NC-MIPS calculates claims-based patient volume, which is reviewed by Operations. If volume is not sufficient, outreach is performed to determine the causes of the data discrepancy. **PS:** -If volume is less than 30% but at least 20%, check MMIS or certification board websites to confirm provider type is pediatrician; if yes, approve lower payment amount.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.3.1 Patient Volume Verification* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.
6. EP must have at least a 30% needy individual patient volume, if s/he is practicing predominantly in an FQHC or RHC	✓		42 USC § 1396b(t)(2)(A)	§ 495.304(c)(3) Medicaid provider scope and eligibility	**Operations:** -EP/EH provides self-calculated numerator. DRIVE query provides numerator based on paid claims for validation. EP/EH provides denominator used for both volumes. With this information, NC-MIPS calculates claims-based patient volume. which is reviewed	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.3.1 Patient Volume Verification* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Patient Volume							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP(1)	EH(2)	Statute(3)	Final Rule(4)	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
					by Operations.		
7. EPs must have more than 50% of his/her patient encounters occur at a FQHC or RHC in a six month period during the prior calendar year to practice predominantly in an FQHC or RHC	✓			§495.366 (b)(4) Financial oversight and monitoring of expenditures	**Operations:** -Check EP/EH self-calculated numerator and denominator to confirm 50% patient encounters occurred at FQHC/RHC during attested 6-month period. NC-MIPS calculates claims-based patient volume with DRIVE-derived numerator and attested denominator to validate the attested 50%, which is reviewed by Operations.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.3.1 Patient Volume Verification* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.
8. EH must have at least 10% Medicaid patient volume (acute care hospital only)		✓	42 USC § 1396b(t)(2)(B)	§ 495.304(e)(1) Medicaid provider scope and eligibility	**Operations:** -EP/EH provides self-calculated numerator. DRIVE query provides numerator based on paid claims for validation. EP/EH provides denominator used for both volumes. With this information, NC-MIPS calculates claims-based patient volume, which is reviewed by Operations.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.3.1 Patient Volume Verification* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Practice Location							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP(1)	EH(2)	Statute(3)	Final Rule(4)	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
9. EP must not be hospital-based (more than 10% of his/her Medicaid claims must be outside POS 21 or 23)	✓		42 USC § 1395w-4. (a)(o)(1)(C)(i-ii)	§ 495.304 (c) Medicaid provider scope and eligibility	* DMA does not check this in pre-payment validation.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section D* for post-payment review.
10. EP must practice in a PA-led	✓		42 USC § 1396b(t)(3)(	§ 495.304(b) Medicaid	**Operations:** -Check additional documentation	Elements reviewed during pre-payment verification process are	This requirement is explicit in the federal rule, and will be added

Practice Location							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP(1)	EH(2)	Statute(3)	Final Rule(4)	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
FQHC or RHC if s/he is a Physician Assistant (PA)			B)	provider scope and eligibility	showing PA is one of the following: 1. The primary provider in the clinic/center 2. The clinical or medical director at the clinic/center 3. The owner of the clinic/center	not re-validated during the post-payment review process.	along with verification information to the SMHP Version 3.0.

Average Length of Stay							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP(1)	EH(2)	Statute(3)	Final Rule(4)	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
11. EH must have an average length of stay of 25 days or less (acute care hospital only)		✓		§ 495.332(b)(5) State Medicaid HIT plan requirements	**Finance:** -Check reports to ensure EH average LOS is 25 days or less.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	This requirement is explicit in the federal rule, and will be added along with verification information to the SMHP Version 3.0.

Adopt, Implement or Upgrade (YR1), Meaningful Use (YR2+)							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP(1)	EH(2)	Statute(3)	Final Rule(4)	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
12. EP or EH must adopt, implement, or upgrade (AIU) certified EHR technology capable of meeting meaningful use	✓	✓	42 USC § 1396b(t)(6)(ii)	§ 495.366 (c) Financial oversight and monitoring of expenditures	**Operations:** -Check EP/EH input (further validation not required in Program Year 1). -Many EPs/EHs voluntarily provide documentation; documentation is patched and scanned into FileNet. -EHR Certification Number verified via ONC web service at time of attestation.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Sections C.3.4 Certified EHR Technology* and *C.3.5 Adopt, Implement, or Upgrade* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Adopt, Implement or Upgrade (YR1), Meaningful Use (YR2+)							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP[1]	EH[2]	Statute[3]	Final Rule[4]	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
13. EP or EH must meaningfully use (MU) certified EHR technology	✓	✓	42 USC § 1396b(t)(6)(ii)	§ 495.366 (c) Financial oversight and monitoring of expenditures	**Operations:** -Check for valid 90-day reporting period and that all measure sets passed automated count and threshold checks.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section C.3.6 Meaningful Use* for pre-payment verification. SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Fiscal Relationship							
	Applicability				State Verification Process and Data Elements		
Eligibility Requirements	EP[1]	EH[2]	Statute[3]	Final Rule[4]	Pre-payment Verification Process and Data Elements	Post-payment Review Process Risk Profile Process and Data Elements	SMHP (or Amendment) Citation with Date
14. Managed care providers must not receive EHR incentive payment that exceeds 105 percent of their capitated rate if Medicaid is the payer, unless incentives are documented and actuarially sound.	✓		42 CFR 438.6(c)(5)(iii) Special contract provisions. 42 CFR 438.6(c)(4)(B)(iv) Documentation.	§ 495.366 (e)(7) Financial oversight and monitoring of expenditures (See also § 438.6 (c)(v)(5)(iii))	***** DMA determined that, due to the limited presence of Managed Care Organizations in North Carolina, this eligibility requirement is unlikely to preclude participation in the majority of cases and thus will not be evaluated pre-payment.	Elements reviewed during pre-payment verification process are not re-validated during the post-payment review process.	SMHP Version 2.0 (April 2012) *Section D* for post-payment review.

Practitioner Type		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
1. EP or EH must be one of the permissible provider or hospital types	**42 USC § 1396b(t)(2)(A-B)** (2) In this subsection and subsection (a)(3)(F), the term "Medicaid provider" means— (A) an eligible professional (as defined in paragraph (3)(B))— (i) who is not hospital-based and has at least 30 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter;	**§ 495.368 (a)(1)(i)** Ensure the qualifications of the providers who request Medicaid EHR incentive payments;

	(ii) who is not described in clause (i), who is a pediatrician, who is not hospital-based, and who has at least 20 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter; and (iii) who practices predominantly in a Federally qualified health center or rural health clinic and has at least 30 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to needy individuals (as defined in paragraph (3)(F)); and (B) (i) a children's hospital, or (ii) an acute-care hospital that is not described in clause (i) and that has at least 10 percent of the hospital's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter (B) The term "eligible professional" means a— (i) physician; (ii) dentist; (iii) certified nurse mid-wife; (iv) nurse practitioner; and (v) physician assistant insofar as the assistant is practicing in a rural health clinic that is led by a physician assistant or is practicing in a Federally qualified health center that is so led.	

Qualifications		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
2. EP or EH must be licensed to practice in the State		**§ 495.368** Combating fraud and abuse.(a) General rule. (1) The State must comply with Federal requirements to—(i) Ensure the qualifications of the providers who request Medicaid EHR incentive payments;
3. EP or EH must be a Medicaid provider.		**§ 495.304 (a)** Medicaid provider scope and eligibility. (a) General rule. The following Medicaid providers are eligible to participate in the HIT Incentives program
4. EP or EH cannot be excluded, sanctioned, or otherwise deemed ineligible to receive payments from the State (e.g. already received incentive payment)		**§ 495.368 (a)(1)(i)** Combating fraud and abuse.(a) General rule. (1) The State must comply with Federal requirements to— (i) Ensure the qualifications of the providers who request Medicaid EHR incentive payments;

Patient Volume		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
5. EP must have at least a 30% Medicaid patient volume (or 20% for pediatricians) if they are not practicing predominantly in an FQHC or RHC+A12	**42 USC § 1396b(t)(2)(A)** (t) Payments to encourage adoption and use of certified EHR technology (2) In this subsection and subsection (a)(3)(F), the term "Medicaid provider" means— (A) an eligible professional (as defined in paragraph (3)(B))— (i) who is not hospital-based and has at least 30 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter; (ii) who is not described in clause (i), who is a pediatrician, who is not hospital-based, and who has at least 20 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter; and (iii) who practices predominantly in a Federally qualified health center or rural health clinic and has at least 30 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to needy individuals (as defined in paragraph (3)(F)); and An eligible professional shall not qualify as a Medicaid provider under this subsection unless any right to payment under sections 1395w–4(o) and 1395w–23(l) of this title with respect to the eligible professional has been waived in a manner specified by the Secretary. For purposes of calculating patient volume under subparagraph (A)(iii), insofar as it is related to uncompensated care, the Secretary may require the adjustment of such uncompensated care data so that it would be an appropriate proxy for charity care, including a downward adjustment to eliminate bad debt data from uncompensated care. In applying subparagraphs (A) and (B)(ii), the methodology established by the Secretary for patient volume shall include individuals enrolled in a Medicaid managed care plan (under section subsection (m) or section 1396u–2 of this title).	**§ 495.304 (c)** To qualify for an EHR incentive payment, a Medicaid EP must... (1) Have a minimum 30 percent patient volume attributable to individuals receiving Medicaid. (2) Have a minimum 20 percent patient volume attributable to individuals receiving Me pediatrician. **§ 495.302** Patient volume means the minimum participation threshold where the numerator is the total number of Medicaid patients or needy individuals treated in any 90-day period in the most recent calendar year preceding the reporting and the denominator is all patient encounters in the same 90-day period. Represented as follows: [Total (Medicaid) treated in any 90-day period in the most recent calendar year preceding the reporting/Total patients in same 90-day period] * 100; or [Total (Needy Individuals) treated in any 90-day period in the most recent calendar year preceding the reporting/Total patients in same 90-day period] * 100. **§ 495.366 (b)(2)** For ensuring patient volume consistent with the criteria in § 495.304 and § 495.306 for each EP who practices predominantly in a FQHC or RHC and for each Medicaid EP who is a physician, pediatrician, nurse practitioner, certified nurse mid-wife or dentist and a methodology in place used to verify such information. (3) For ensuring that the EP is a provider who meets patient volume consistent with the criteria in § 495.304 and a methodology in place used to verify such information.
6. EP must have at least a 30% needy individual patient volume if they are practicing predominantly in an FQHC or RHC	**42 USC §. 1396b(t)(2)(A)** (t) Payments to encourage adoption and use of certified EHR technology (2) In this subsection and subsection (a)(3)(F), the term "Medicaid provider" means— (A) an eligible professional (as defined in paragraph (3)(B))— (i) who is not hospital-based and has at least 30 percent of the	**§ 495.366 (b)(4)** Collect and verify basic information on Medicaid providers to assure that EPs are practicing predominantly in a Federally-qualified health center or rural health clinic. **§495.366 (b)(2)** Financial oversight and monitoring of expenditures. (b) Provider eligibility as basis for making payment. Subject to §495.332, the State must do all of the following:

Patient Volume		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
	professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter; (ii) who is not described in clause (i), who is a pediatrician, who is not hospital-based, and who has at least 20 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter; and (iii) who practices predominantly in a Federally qualified health center or rural health clinic and has at least 30 percent of the professional's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to needy individuals (as defined in paragraph (3)(F)); and An eligible professional shall not qualify as a Medicaid provider under this subsection unless any right to payment under sections 1395w–4(o) and 1395w–23(l) of this title with respect to the eligible professional has been waived in a manner specified by the Secretary. For purposes of calculating patient volume under subparagraph (A)(iii), insofar as it is related to uncompensated care, the Secretary may require the adjustment of such uncompensated care data so that it would be an appropriate proxy for charity care, including a downward adjustment to eliminate bad debt data from uncompensated care. In applying subparagraphs (A) and (B)(ii), the methodology established by the Secretary for patient volume shall include individuals enrolled in a Medicaid managed care plan (under section subsection (m) or section 1396u–2 of this title).	(2) Collect and verify basic information on Medicaid providers to assure patient volume
7. EP practice predominately in a FQHC or RHC (e.g. at least 50% of their patient encounters over six month period in prior calendar year at an FQHC or RHC)		**§ 495.304(c)(3)** Medicaid provider scope and eligibility (3) Practice predominantly in a FQHC or RHC and have a minimum 30 percent patient volume attributable to needy individuals, as defined at § 495.302. **§495.366 (b)(4)** Financial oversight and monitoring of expenditures. (b) Provider eligibility as basis for making payment. Subject to §495.332, the State must do all of the following: (4) Collect and verify basic information on Medicaid providers to assure that EPs are practicing predominantly in a Federally-qualified health center or rural health clinic.
8. EH must have at least 10% Medicaid patient	**42 USC § 1396b(t)(2)(B)** (t) Payments to encourage adoption and use of certified EHR technology	**§ 495.304 (e)(1)** Medicaid provider scope and eligibility. (e) Additional requirement for the eligible hospital. To be eligible for an EHR

Patient Volume		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
volume (acute care hospital only)	(2) In this subsection and subsection (a)(3)(F), the term "Medicaid provider" means— (B)(i) a children's hospital, or (ii) an acute-care hospital that is not described in clause (i) and that has at least 10 percent of the hospital's patient volume (as estimated in accordance with a methodology established by the Secretary) attributable to individuals who are receiving medical assistance under this subchapter. An eligible professional shall not qualify as a Medicaid provider under this subsection unless any right to payment under sections 1395w–4(o) and 1395w–23(l) of this title with respect to the eligible professional has been waived in a manner specified by the Secretary. For purposes of calculating patient volume under subparagraph (A)(iii), insofar as it is related to uncompensated care, the Secretary may require the adjustment of such uncompensated care data so that it would be an appropriate proxy for charity care, including a downward adjustment to eliminate bad debt data from uncompensated care. In applying subparagraphs (A) and (B)(ii), the methodology established by the Secretary for patient volume shall include individuals enrolled in a Medicaid managed care plan (under section subsection (m) or section 1396u–2 of this title).	incentive payment for each year for which the eligible hospital seeks an EHR incentive payment, the eligible hospital must meet the following criteria: (1) An acute care hospital must have at least a 10 percent Medicaid patient volume for each year for which the hospital seeks an EHR incentive payment. (2) A children's hospital is exempt from meeting a patient volume threshold.

Practice Location		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
9. EP must not be hospital-based	**42 USC Sec. 4101. (a)(o)(1)(C)(i-ii)** (C) NON-APPLICATION TO HOSPITAL-BASED ELIGIBLE PROFESSIONALS.— (i) IN GENERAL.—No incentive payment may be made under this paragraph in the case of a hospital-based eligible professional. (ii) HOSPITAL-BASED ELIGIBLE PROFESSIONAL.—For purposes of clause (i), the term 'hospital-based eligible professional' means, with respect to covered professional services furnished by an eligible professional during the EHR reporting period for a payment year, an eligible professional, such as a pathologist, anesthesiologist, or emergency physician,	**§ 495.332 (b)(4)** For ensuring that each Medicaid EP is not hospital-based and a methodology in place used to verify such information. **§ 495.403 (c)** Additional requirements for the Medicaid EP. To qualify for an EHR incentive payment, a Medicaid EP must not be hospital-based as defined § 495.4 of this subpart...

Practice Location		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
	who furnishes substantially all of such services in a hospital setting (whether inpatient or outpatient) and through the use of the facilities and equipment, including qualified electronic health records, of the hospital. The determination of whether an eligible professional is a hospital-based eligible professional shall be made on the basis of the site of service (as defined by the Secretary) and without regard to any employment or billing arrangement between the eligible professional and any other provider.	
10. If EP is a Physician Assistant (PA), he or she must practice in a PA-led FQHC or RHC	**42 USC § 1396b(t)(3)(B)** (t) Payments to encourage adoption and use of certified EHR technology (3) In this subsection and subsection (a)(3)(F): (B) The term "eligible professional" means a— (i) physician; (ii) dentist; (iii) certified nurse mid-wife; (iv) nurse practitioner; and (v) physician assistant insofar as the assistant is practicing in a rural health clinic that is led by a physician assistant or is practicing in a Federally qualified health center that is so led.	**§ 495.304** Medicaid provider scope and eligibility.(a) General rule. The following Medicaid providers are eligible to participate in the HIT incentives program:(1) Medicaid EPs. (2) Acute care hospitals. (3) Children's hospitals.(b) Medicaid EP. The Medicaid professional eligible for an EHR incentive payment is limited to the following when consistent with the scope of practice regulations, as applicable for each professional (§ 440.50, § 440.60, § 440.100; § 440.165, and § 440.166):(1) A physician.(2) A dentist.(3) A certified nurse-midwife.(4) A nurse practitioner.(5) A physician assistant practicing in a Federally qualified health center (FQHC) led by a physician assistant or a rural health clinic (RHC), that is so led by a physician assistant.

Average Length of Stay		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
11. EH must have an average length of stay of 25 days or less (acute care hospital only)		**§ 495.302** Acute care hospital means a health care facility— (1) Where the average length of patient stay is 25 days or fewer; and (2) With a CMS certification number (previously known as the Medicare provider number) that has the last four digits in the series 0001—0879

Adopt, Implement or Upgrade (Year 1) Meaningful Use (Year 2+)		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
12. EP or EH must adopt, implement, or upgrade (AIU) certified EHR technology capable of	**42 USC § 1396b(t)(6)(C)(ii)** (6) Payments described in paragraph (1) are not in accordance with this subsection unless the following requirements are met: (C)(i) Subject to clause (ii), with respect to payments to a	**§ 495.302** Adopt, implement or upgrade means— (1) Install or commence utilization of certified EHR technology capable of meeting meaningful use requirements; or (2) Expand the available functionality of certified EHR technology capable of meeting

Adopt, Implement or Upgrade (Year 1) Meaningful Use (Year 2+)		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
meeting meaningful use	Medicaid provider— (I) for the first year of payment to the Medicaid provider under this subsection, the Medicaid provider demonstrates that it is engaged in efforts to adopt, implement, or upgrade certified EHR technology; and (II) for a year of payment, other than the first year of payment to the Medicaid provider under this subsection, the Medicaid provider demonstrates meaningful use of certified EHR technology through a means that is approved by the State and acceptable to the Secretary, and that may be based upon the methodologies applied under section 1395w–4(o) or 1395ww(n) of this title. (ii) In the case of a Medicaid provider who has completed adopting, implementing, or upgrading such technology prior to the first year of payment to the Medicaid provider under this subsection, clause (i)(I) shall not apply and clause (i)(II) shall apply to each year of payment to the Medicaid provider under this subsection, including the first year of payment. (D) To the extent specified by the Secretary, the certified EHR technology is compatible with State or Federal administrative management systems.	meaningful use requirements at the practice site, including staffing, maintenance, and training. **§ 495.366 (c)** Meaningful use and efforts to adopt, implement, or upgrade to certified electronic health record technology to make payment. Subject to §§ 495.366495.354 and 495.374, the State must annually collect and verify information regarding the efforts to adopt, implement, or upgrade certified EHR technology and the meaningful use of said technology before making any payments to providers.
13. EP or EH must meaningfully use (MU) a certified EHR technology	**42 USC § 1396b(t)(6)(C)(ii)** (6) Payments described in paragraph (1) are not in accordance with this subsection unless the following requirements are met: (C)(i) Subject to clause (ii), with respect to payments to a Medicaid provider— (I) for the first year of payment to the Medicaid provider under this subsection, the Medicaid provider demonstrates that it is engaged in efforts to adopt, implement, or upgrade certified EHR technology; and (II) for a year of payment, other than the first year of payment to the Medicaid provider under this subsection, the Medicaid provider demonstrates meaningful use of certified EHR technology through a means that is approved by the State and acceptable to the Secretary, and that may be based upon the methodologies applied under section 1395w–4(o) or 1395ww(n) of this title. (ii) In the case of a Medicaid provider who has completed adopting, implementing, or upgrading such technology prior to the first year of payment to the Medicaid provider under this subsection, clause (i)(I) shall not apply and clause (i)(II) shall apply to each year of payment to the Medicaid provider under this subsection, including the first year of payment.	**§ 495.366 (c)** Meaningful use and efforts to adopt, implement, or upgrade to certified electronic health record technology to make payment. Subject to §§ 495.354 and 495.374, the State must annually collect and verify information regarding the efforts to adopt, implement, or upgrade certified HER technology and the meaningful use of said technology before making any payments to providers.

Adopt, Implement or Upgrade (Year 1) Meaningful Use (Year 2+)		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
	(D) To the extent specified by the Secretary, the certified EHR technology is compatible with State or Federal administrative management systems.	

Fiscal Relationship		
Eligibility Requirements	**Statute** ***42 USC Sec. 4201. Medicaid Provider HIT Adoption and Operation Payments; Implementation Funding***	**Final Rule** ***42 CFR Parts 412, 413, 422 et al. Medicare and Medicaid Programs; EHR Incentive Program***
14. Managed care providers must not receive EHR incentive payment that exceeds 105 percent of their capitated rate if Medicaid is the payer, unless incentives are documented and actuarially sound.	**42 CFR 438.6(c)(5)(iii)** Special Contracts.(iii) Contracts with incentive arrangements may not provide for payment in excess of 105 percent of the approved capitation payments attributable to the enrollees or services covered by the incentive arrangement, since such total payments will not be considered to be actuarially sound. **42 CFR 438.6(c)(4)(B)(iv)** (4) Documentation. The State must provide the following documentation: (iv) An explanation of any incentive arrangements, or stop-loss, reinsurance, or any other risk-sharing methodologies under the contract.	**§ 495.366 (e)(7)** Subject to § 495.332, the State must have a process in place to assure that any existing fiscal relationships with providers to disburse the incentive through Medicaid managed care plans does not exceed 105 percent of the capitation rate, in order to comply with the Medicaid managed care incentive payment rules at § 438.6(c)(5)(iii) of this chapter and a methodology for verifying such information. **§ 438.6 (c)(v)(5)(iii)** Contracts with incentive arrangements may not provide for payment in excess of 105 percent of the approved capitation payments attributable to the enrollees or services covered by the incentive arrangement, since such total payments will not be considered to be actuarially sound.

Appendix 13 - North Carolina EP & EH Post Payment AIU Review Tool

Provider Name:		**Review Date:**	
Provider Type:		**Reviewer Name:**	
Provider Tax ID:		**Type of Review:**	**AIU**
NPI #:		**Location of Review:**	desk or onsite
License #:		**PI Case #:**	
Attestation Start Date:		**Threshold %:**	
Attestation End Date:		**Numerator:**	
Payment Date:		**Denominator:**	

RATING CODE: 1 = Yes/Met 2 = No/Not Met 3= Not Applicable 4=Item Verified During Pre-payment Validation

Provider Qualification Measures		**Rating**
1	Is the provider one of the permissible types?	
2	Is the provider licensed to practice?	
3	Is the provider enrolled in NC Medicaid?	
4	Is the provider excluded, sanctioned, or otherwise deemed ineligible to receive payments from the state?	
Eligibility Proof – Patient Volume		**Rating**
5	Is there documentation to support the numerator?	
6	Is there documentation to support the denominator?	
7	Is there documentation to support discharges and acute Medicaid days?	
8	Does the EH have at least 10% Medicaid patient volume?	
9	Does the EH have an average length stay of 25 days or less?	
10	Does the EP have at least 30% Medicaid patient volume (20% for Pediatrician)?	
11	EP Practices Predominately at an FQHC or RHC: Does at least 50% of patient encounters occur at an FQHC or RHC in a six-month period during the prior calendar year?	
12	Does the Physician's Assistant (PA) practice in a PA-led FQHC or RHC?	
13	Is the EPs reported out-of-state Medicaid or Needy Individual patient volume valid?	
14	Hospital-based EP: Did more than 10% of encounters occur outside the emergency room or inpatient settings?	
Payment Validation		**Rating**

15	Have all payment validation criteria been met?	
Adoption Proof (at least one):		**Rating**
16	Purchase order verifying certified EHR system	
17	Software licensing agreement/contract of certified EHR system	
18	Executed sales contracts for software and/or hardware for certified EHR technology	
19	Service performance/maintenance agreement relating to certified EHR technology	
Implementation Proof (at least one):		**Rating**
20	Evidence of costs for installation of certified EHR technology	
21	Data Use Agreements pertaining to certified EHR technology	
22	Evidence of costs associated with staff training support or staff support to implement certified EHR technology, including a contract if applicable	
23	Documented costs associated with server/workstation for the implementation of certified EHR technology	
24	For EHs: Cost reports reflecting implementation expenses relating to certified EHR technology	
Upgrade Proof (at least one):		**Rating**
25	Receipts from EHR software vendors for certified EHR technology	
26	Executed sales contracts for software and/or hardware for certified EHR technology	
27	Seller-accepted purchase orders for certified EHR technology	
28	Software licensing agreements for certified EHR technology	
29	Service performance agreement relating to EHR technology	
Results of Audit (Pass or Fail)		

Appendix 14 - North Carolina EP Post Payment MU Review Tool

Provider Name:		**Review Date:**	
Provider Type:		**Reviewer Name:**	
Provider Tax ID:		**Type of Review:**	**MU**
NPI #:		**Location of Review:**	desk or onsite
License #:		**PI Case #:**	
Attestation Start Date:		**Threshold %:**	
Attestation End Date:		**Numerator:**	
Payment Date:		**Denominator:**	

RATING CODE: 1 = Yes/Met 2 = No/Not Met 3= Not Applicable 4=Item Verified During Pre-payment Validation

	Provider Qualification Measures	**Rating**
1	Is the provider one of the permissible types?	
2	Is the provider licensed to practice?	
3	Is the provider enrolled in NC Medicaid?	
4	Is the provider excluded, sanctioned, or otherwise deemed ineligible to receive payments from the State?	
	Eligibility Proof – Patient Volume	**Rating**
5	Is there documentation to support the numerator?	
6	Is there documentation to support the denominator?	
7	Is there documentation to support discharges and acute Medicaid days?	
8	Does the EH have at least 10% Medicaid patient volume?	
9	Does the EH has an average length stay of 25 days or less?	
10	Does the EP has at least 30% Medicaid patient volume (20% for Pediatrician)?	
11	EP Practices Predominately at an FQHC or RHC: Does at least 50% of patient encounters occur at an FQHC or RHC in a six-month period during the prior calendar year?	
12	Does the Physician's Assistant (PA) practice in a PA-led FQHC or RHC?	
13	Is the EPs reported out-of-state Medicaid or Needy Individual patient volume valid?	
14	Hospital-based EP: Do more than 10% of encounters occur outside the emergency room or inpatient settings?	
	Payment Validation	**Rating**
15	Have all payment validation criteria have been met?	

Basic Requirements		Rating
16	Did at least 50% of EP encounters occur at a location with certified EHR technology?	
17	Was at least 80% of unique patient data recorded in the certified EHR?	

Core MU Measures (all required)		Rating
18	Use computerized physician order entry (CPOE)	
19	Implement drug-drug and drug-allergy interaction checks	
20	Maintain and up-to-date problem list of current and active diagnoses	
21	Generate and transmit permissible prescriptions electronically (eRx)	
22	Maintain active medication list	
23	Maintain active medication allergy list	
24	Record demographics	
25	Record and chart changes in vital signs	
26	Record smoking status for patients age 13 or older	
27	Report ambulatory CQMs	
28	Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance with that rule	
29	Provide patients with an electronic copy of their health information, upon request	
30	Provide clinical summaries for patients for each office visit	
31	Capability to exchange key clinical information electronically	
32	Protect electronic health information created or maintained by the certified EHR technology	
Menu MU Measures (five required)		**Rating**
33	Implement drug-formulary checks	
34	Incorporate clinical lab-test results into EHR as structured data	
35	Generate lists of patients by specific condition	
36	Send reminders to patients for preventative/follow-up care	
37	Provide patients with timely electronic access to their health information	
38	Use certified EHR technology to identify patient-specific education resources	
39	Perform medication reconciliation	
40	Provide summary care record for each transition of care or referral	
41	Capability to submit electronic data to immunization registries	
42	Capability to submit electronic syndromic surveillance data	

Clinical Quality Measures (three required)		Rating
43	Hypertension: Blood Pressure Management	
44	Preventative Care and Screening Measure Pair: (a) Tobacco Use Assessment (b) Tobacco Cessation Intervention	
45	Adult Weight Screening and Follow-up	
46	Weight Assessment and Counseling for Children and Adolescents	
47	Childhood Immunization Status	
48	Preventative Care and Screening: Influenza immunization for patients 50 years and older	
49	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment	
50	Prenatal Care: Screening for HIV	
51	Prenatal Care: Anti-D Immune Globulin	
52	Controlling High Blood Pressure	
53	Cervical Cancer Screening	
54	Chlamydia Screening for Women	
55	Use of Appropriate Medications for Asthma	
56	Low Back Pain: Use of Imaging Studies	
57	Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control	
58	Diabetes: HbA1c Control (<8%)	
59	Diabetes: HbA1c Poor Control	
60	Prostate Cancer: Avoidance of Overuse of Bone Scan for Staging Low-Risk Prostate Cancer Patients	
61	Pneumonia Vaccination Status for Older Adults	
62	Breast Cancer Screening	
63	Colorectal Cancer Screening	
64	Smoking and Tobacco Use Cessation, Medical Assistance: (a) Advising smokers and tobacco users to quit (b) Discussing smoking and tobacco use cessation medications, (c) Discussing smoking and tobacco use cessation strategies	
65	Diabetes: Eye Exam	
66	Diabetes: Urine Screening	
67	Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation	
68	Diabetes: Foot Exam	
69	Diabetic Retinopathy: Documentation of Presence or absence of Macular Edema and Level of Severity of Retinopathy	
70	Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care	

71	Coronary Artery Disease (CAD): Drug Therapy for Lowering LDL Cholesterol	
72	Diabetes: LDL Management and Control	
73	Heart Failure (HF): Warfarin Therapy Patients with Atrial Fibrillation	
74	Ischemic Vascular Disease (IVD): Blood Pressure Management	
75	Ischemic Vascular Disease (IVD): Use of Aspirin or another Antithrombotic	
76	Diabetes: Blood Pressure Management	
77	Heart Failure (HF): Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	
78	Asthma Pharmacologic Therapy	
79	Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD	
80	Asthma Assessment	
81	Appropriate Testing for Children with Pharyngitis	
82	Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)	
83	Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor / Progesterone Receptor (ER/PR) Positive Breast Cancer	
84	Oncology Colon Cancer: Chemotherapy for Stage III Colon Cancer Patients	
85	Heart Failure (HF): Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction (LVSD)	
86	Antidepressant Medication Management: (a) Effective Acute Phase Treatment, (b) Effective Continuation Phase Treatment	
Results of Audit (Pass or Fail)		

Appendix 15 - NC-MIPS Clerk Review

NC-MIPS CLERK REVIEW

NAME _____Confirmation # _____

MPN _____ Payee MPN_____ Clerk ID _____

Matching

Check all the following data against EVC. If any data does not match, Outreach must be conducted immediately. (Please remember to add to outreach spreadsheet)

Name Matches ☐ NPI Matches ☐ Address + Zip Matches -☐

Provider Specialty_____ Is this a PA? _____

If yes, did PA send required document? _____

Manual Validation

Signed attestations received -☐ MPN active during entire 90 day period ☐

Any open ARC codes _____ if yes please indicate ARC code and refer to supervisor for review._____ Validate E.H.R Certification # True /False

License Active? _____

Payee

Does Payee NPI match the MPN in MMIS? _____

Active EFT Information on file ☐

Payee MPN Active? ☐

Drive _____ **Clerk ID** _____

Is patient volume 30% or greater? _____

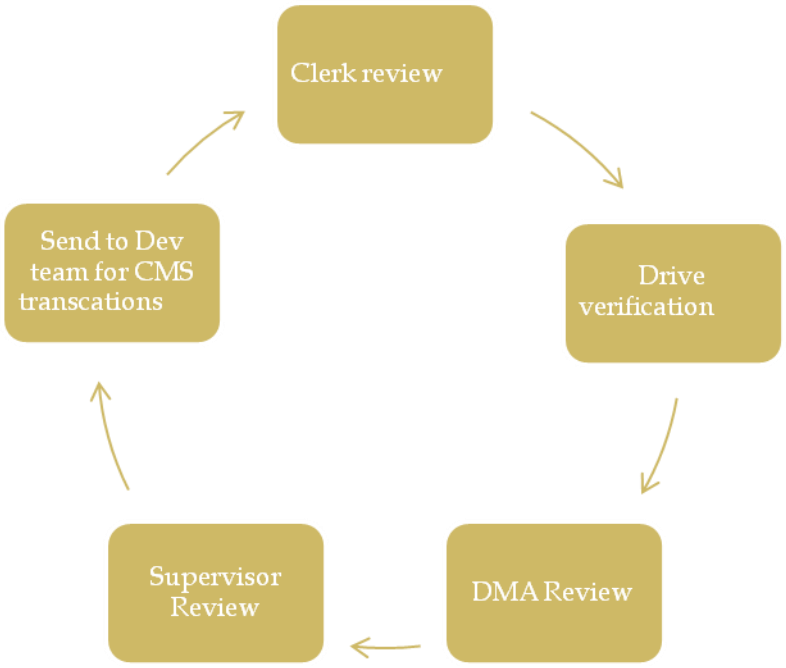
Was Drive Verified by Data Speicalist? _____

Pass / Fail / Refer attestation _____

Date sent to DMA_____ **Date sent to CMS** _____

NC-MIPS CLERK REVIEW

NC-MIPS Operation Work Flow



Once EP has passed all checks, the manual validation spreadsheet will be used to update the operations report & will be filed on sharenet.

Reports

B-6 Transaction report

Daily Submitted Attestations

Operations Report

Outreach Report

Manual Validation spreadsheet

B-7 report

D-16 Report

Hp Request File

Appendix 16 - Introductory Letter – On-site Review

North Carolina Department of Health and Human Services
Division of Medical Assistance
2501 Mail Service Center • Raleigh, N. C. 27699-2501 • Tel 919-855-4100 • Fax 919-733-6608

Beverly Eaves Perdue, Governor
Albert A. Delia, Acting Secretary

Michael Watson, Director

<Date>

Provider Name, Provider #
<Address Line 1>
<Address Line 2>
<City, State, Zip>

Subject: **Introductory Letter - On-Site Review** **PI Case # :** <Insert PI Case #>

Dear <Provider Name>:

In accordance with 42 CFR §495.300 which implements section 4201 of the American Reinvestment and Recovery Act of 2009 and sections 1903(a)(3)(F) and 1903(t) of the Act, NC Medicaid provides for incentive payments to Medicaid providers for adopting, implementing, or upgrading certified electronic health record technology or for meaningful use of such technology.

Pursuant to 42 CFR § 495.368, States must comply with Federal requirements to ensure the qualifications of the providers who request Medicaid Electronic Health Record (EHR) incentive payments, to detect improper payments and to take corrective action in the case of improper payments to providers. North Carolina Division of Medical Assistance (DMA) Program Integrity Section or its authorized agent is conducting a post-payment review of the EHR Incentive payment dated <insert date range>.

Upon arrival, the Post-Payment Review representative (s) will meet with owners and/or management for a brief introduction and explanation of the purpose of this review and present the Request for Records. The review will begin immediately after the introductory meeting and will be completed while the team is onsite. Staff will require secure space, but will make every effort to minimize disruption to the work in your agency.

Upon completion of the review, the Health Information Technology (HIT) Investigator(s) will meet with you to review the preliminary findings. If findings are noted that indicate EHR incentive overpayments may have occurred, you will be sent a Tentative Notice of Overpayment.

Providers are required by federal regulation and the terms and conditions of your Medicaid Participation Agreement to fully cooperate with DMA and its authorized agents engaged in program integrity activities such as audits, post payment reviews, and investigations. If your agency has any questions or concerns about this visit, please speak to the Team Leader of this review.

Sincerely,

<Insert PI Lead Investigator Name>
<Insert Name of Section>
<Insert Telephone Number>

Location: 1985 Umstead Drive • Dorothea Dix Hospital Campus • Raleigh, N.C. 27603
An Equal Opportunity / Affirmative Action Employer
www.ncdhhs.gov/dma

Appendix 17 - On-site AIU Records Request

North Carolina Department of Health and Human Services
Division of Medical Assistance

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Carol H. Steckel, MPH
Director

<Insert Date>

<Insert Provider Name>
<Address Line 1>
<Address Line 2>
<City, State, Zip>

PI Case # : <Insert PI Case #>

Subject: **On-site Audit – AIU Records Request**

Dear Provider:

In accordance with 42 CFR §495.300 which implements section 4201 of the American Recovery and Reinvestment Act of 2009 and sections 1903(a)(3)(F) and 1903(t) of the Social Security Act , NC Medicaid provides for incentive payments to Medicaid providers for adopting, implementing, or upgrading certified electronic health record technology or for meaningful use of such technology. Pursuant to 42 CFR § 495.368, States must comply with Federal requirements to ensure the qualifications of the providers who request Medicaid Electronic Health Record (EHR) incentive payments, to detect improper payments and to take corrective action in the case of improper payments to providers. North Carolina Division of Medical Assistance (DMA) Program Integrity Section or its authorized agent is conducting a post-payment review of your agency's EHR incentive payment dated <insert date range>.

The Division of Medical Assistance (DMA) or its authorized agent is authorized by Section 1902(a) (27) of the Social Security Act and Federal Regulation 42 CFR § 431.107 to access patient medical records for the purposes directly related to the administration of the Medicaid Program. In addition, when applying for Medicaid benefits, each beneficiary signs a release which authorizes access to his/her Medicaid records by appropriate regulatory authorities. Therefore, no special beneficiary permission is necessary for release of records to DMA or its authorized agents.

Federal regulations and provider agreements with DMA require the provider to maintain all clinical and financial records for a period of five (5) years. Such records shall be subject to audit and review by Federal and State representatives. Your agency is now on notice that DMA intends to review your agency's EHR incentive payment and supporting documentation. Information to be reviewed is on the attached list.

If you have any questions about this notice, please speak to the Team Leader of this review.

Sincerely,

www.ncdhhs.gov • www.ncdhhs.gov/dma
Tel 919-855-4100 • Fax 919-733-6608
Location: 1985 Umstead Drive • Dorothea Dix Hospital Campus • Raleigh, NC 27603
Mailing Address: 2501 Mail Service Center • Raleigh, NC 27699-2501
An Equal Opportunity / Affirmative Action

Rev 1 | Issued 012913
EHR AIU On-site Records Request

PROVIDER NAME, PROVIDER #
Medical Records Request
DATE

<Insert Name, Title>
<DMA Program Integrity or Vendor Company Name>

Enclosures

Attachment

Please supply documentation for all of the following that apply to your attestation:

Adoption Proof:
☐ Purchase order verifying certified EHR;
☐ Software licensing agreement/contract of certified EHR system;
☐ Executed sales contracts for software and/or hardware for certified EHR technology; and/or
☐ Service performance/maintenance agreement relating to certified EHR technology.

Implementation Proof:
☐ Costs for installation of certified EHR technology;
☐ Data use agreements pertaining to certified EHR technology;
☐ Costs associated with staff training support or staff support to implement certified EHR technology, including a contract if applicable;
☐ Costs associated with server/workstation for the implementation of certified EHR Technology; and/or
☐ Cost reports reflecting implementation expenses relating to certified EHR technology for EH providers.

Upgrade Proof:
☐ Receipts from EHR software vendors for certified EHR technology;
☐ Executed sales contracts for software and/or hardware for certified EHR technology;
☐ Seller-accepted purchase orders for certified EHR technology;
☐ Software licensing agreements for certified EHR technology; and/or
☐ Service performance agreement relating to EHR technology.

Denominator Proof:
☐ Reports or other documentation to substantiate overall patient volume.

Appendix 18 - MU On-site Record Request

North Carolina Department of Health and Human Services
Division of Medical Assistance

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Carol H. Steckel, MPH
Director

<Insert Date>

<Insert Provider Name, Provider #>
<Address Line 1>
<Address Line 2>
<City, State, Zip>

Subject: **On-site Audit – MU Records Request** **PI Case # :** <Insert PI Case #>

Dear Provider Name:

In accordance with 42 CFR §495.300 which implements section 4201 of the American Recovery and Reinvestment Act of 2009 and sections 1903(a)(3)(F) and 1903(t) of the Social Security Act , NC Medicaid provides for incentive payments to Medicaid providers for adopting, implementing, or upgrading certified electronic health record technology or for meaningful use of such technology.

Pursuant to 42 CFR § 495.368, States must comply with Federal requirements to ensure the qualifications of the providers who request Medicaid Electronic Health Record (EHR) incentive payments, to detect improper payments and to take corrective action in the case of improper payments to providers. North Carolina Division of Medical Assistance (DMA) Program Integrity Section or its authorized agent is conducting a post-payment review of your agency's EHR incentive payment dated <insert date range>.

DMA or its authorized agent is authorized by Section 1902(a) (27) of the Social Security Act and Federal Regulation 42 CFR § 431.107 to access patient medical records for the purposes directly related to the administration of the Medicaid Program. In addition, when applying for Medicaid benefits, each beneficiary signs a release which authorizes access to his/her Medicaid records by appropriate regulatory authorities. Therefore, no special beneficiary permission is necessary for release of records to DMA or its authorized agents.

Federal regulations and provider agreements with DMA require the provider to maintain all clinical and financial records for a period of five (5) years. Such records shall be subject to audit and review by Federal and State representatives. Your agency is now on notice that DMA intends to review your agency's EHR incentive payment and supporting documentation. Information to be reviewed is on the attached list.

If you have any questions about this notice, please speak to the Team Leader of this review.

www.ncdhhs.gov • www.ncdhhs.gov/dma
Tel 919-855-4100 • Fax 919-733-6608
Location: 1985 Umstead Drive • Dorothea Dix Hospital Campus • Raleigh, NC 27603
Mailing Address: 2501 Mail Service Center • Raleigh, NC 27699-2501
An Equal Opportunity / Affirmative Action Employer

Rev 1 | Issued 012913
EHR MU On-site Records Request

PROVIDER NAME, PROVIDER #
Medical Records Request
DATE

Sincerely,

<Insert Name, Title>
<DMA Program Integrity or Vendor Company Name>
<DMA Section or Vendor Email>
<Telephone Number>

Attachment

PLEASE SUPPLY DOCUMENTATION OR DEMONSTRATION OF THE FOLLOWING THAT APPLY TO YOUR MU ATTESTATION AND OTHER REQUIREMENTS FOR DEMONSTRATION OF MEANINGFUL USE:

☐ **Confirmation of use of the EHR technology identified in your attestation**

Core Meaningful Use Measures

Core MU Measures (all required)	**Exclusions**
Use computerized physician order entry (CPOE)	Yes
Implement drug-drug and drug-allergy interaction checks	No
Maintain an up-to-date problem list of current and active diagnoses	No
Generate and transmit permissible prescriptions electronically (eRx)	Yes
Maintain active medication list	No
Maintain active medication allergy list	No
Record demographics	No
Record and chart changes in vital signs	Yes
Record smoking status of patients age 13 or older	Yes
Report ambulatory CQMs	No
Implement one clinical decision support rule relevant to specialty or high clinical priority along with the ability to track compliance with that rule	No
Provide patient with an electronic copy of their health information, upon request	Yes
Provide clinical summaries for patients for each office visit	Yes
Capability to exchange key clinical information electronically	No
Protect electronic health information created or maintained by the certified HER technology	No

Menu Meaningful Use Measures

Menu MU Measures (five required)	**Exclusions**
☐ Implement drug-formulary checks	Yes
☐ Incorporate clinical lab-test results into EHR as structured data	Yes
☐ Generate lists of patients by specific condition	No
☐ Send reminders to patients for preventive/follow-up care	Yes
☐ Provide patients with timely electronic access to their health information	Yes
☐ Use certified EHR technology to identify patient-specific education resources	No
☐ Perform medication reconciliation	Yes
☐ Provide summary care record for each transition of care or referral	Yes
☐ Capability to submit electronic data to immunization registries	Yes
☐ Capability to submit electronic syndromic surveillance data	Yes

Alternate Core CQMs	NQF
☐ Coronary Artery Disease: (CAD): Drug Therapy for Lowering LDL-Cholesterol	0074
☐ Diabetes: LDL Management and Control	0064
☐ Heart Failure (HF): Warfarin Therapy Patients with Atrial Fibrillation	0084
☐ Ischemic Vascular Disease (IVD): Blood Pressure Management	0073
☐ Ischemic Vascular Disease (IVD): Use of Aspirin or another Antithrombotic	0068
☐ Diabetes: Blood Pressure Management	0061
☐ Heart Failure (HF): Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	0081
☐ Asthma Pharmacologic Therapy	0047
☐ Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD	0067
☐ Asthma Assessment	0001
☐ Appropriate Testing for Children with Pharyngitis	0002
☐ Coronary Artery Disease (CAD): Beta-Blocker Therapy for CAD Patients with Prior Myocardial Infarction (MI)	0070
☐ Oncology Breast Cancer: Hormonal Therapy for Stage IC-IIIC Estrogen Receptor/Progesterone Receptor (ER/PR) Positive Breast Cancer	0387
☐ Oncology Colon Cancer: Chemotherapy for Stage III Colon Cancer Patients	0385
☐ Heart Failure (HF): Beta-Blocker therapy for Left Ventricular Systolic Dysfunction (LVSD)	0083
☐ Anti-depressant \medication management: (a) Effective Acute Phase Treatment, (b) Effective Continuation Phase Treatment	0105

Appendix 19 - EHR Desk Records Request

North Carolina Department of Health and Human Services
Division of Medical Assistance

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Carol H. Steckel, MPH
Director

<Insert Date>

Provider name, Provider #
Attention: Records
<Address Line 1>
<Address Line 2>
<City, State, Zip>

CERTIFIED MAIL
0000 0000 0000 0000 0000

PI CASE # : <Insert PI Case #>

Subject: **AIU - Request for Records**

Dear Provider:

In accordance with 42 CFR §495.300 which implements section 4201 of the American Recovery and Reinvestment Act of 2009 and sections 1903(a)(3)(F) and 1903(t) of the Social Security Act , NC Medicaid provides for incentive payments to Medicaid providers for adopting, implementing, or upgrading certified electronic health record technology or for meaningful use of such technology. Pursuant to 42 CFR § 495.368, States must comply with Federal requirements to ensure the qualifications of the providers who request Medicaid Electronic Health Record (EHR) incentive payments, to detect improper payments and to take corrective action in the case of improper payments to providers. North Carolina Division of Medical Assistance (DMA) Program Integrity Section or its authorized agent is conducting a post-payment review of your agency's EHR incentive payment for payment year <insert year> and your attested patient volume for the period <insert from and to date>.

DMA or its authorized agent is authorized by Section 1902(a) (27) of the Social Security Act and Federal Regulation 42 CFR § 431.107 to access patient medical records for the purposes directly related to the administration of the Medicaid Program. In addition, when applying for Medicaid benefits, each beneficiary signs a release which authorizes access to his/her Medicaid records by appropriate regulatory authorities. Therefore, no special beneficiary permission is necessary for release of records to DMA or its authorized agents.

Federal regulations and provider agreements with DMA require the provider to maintain all clinical and financial records for a period of five (5) years. Such records shall be subject to audit and review by Federal and State representatives. Your agency is now on notice that DMA intends to review your agency's EHR incentive payment and supporting documentation. Information to be reviewed is on the attached list.

www.ncdhhs.gov • www.ncdhhs.gov/dma
Tel 919-855-4100 • Fax 919-733-6608
Location: 1985 Umstead Drive • Dorothea Dix Hospital Campus • Raleigh, NC 27603
Mailing Address: 2501 Mail Service Center • Raleigh, NC 27699-2501
An Equal Opportunity / Affirmative Action Employer

Rev 2 | Issued 020713
EHR AIU Desk Records Request

Documentation needed from you is listed on the attached sheet. Forward the requested information with the attached cover form within 30 calendar days of receipt of this letter to the appropriate address below:

By US Mail:
(PI Investigator)
Program Integrity Section
N.C. Division of Medical Assistance
2501 Mail Service Center
Raleigh, North Carolina 27699-2501

By UPS, FedEx, or AIRBORNE:
(PI Investigator)
Program Integrity Section
N.C. Division of Medical Assistance
333 E. Six Forks Road
Raleigh, NC 27609

If you have questions about this notice, please call <Insert Name> at <Insert Phone> or by fax at <Insert fax>.

Sincerely,

<Insert PI Investigator Name>
<Insert Name of Section>

Enclosures

Appendix 20 - EHR TNO PI Non-Extrapolation Letter

North Carolina Department of Health and Human Services
Division of Medical Assistance

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Carol H. Steckel, MPH
Director

TENTATIVE NOTICE OF OVERPAYMENT

<Insert Provider Name>
<Insert Provider Mailing Addres>
<Insert City, State, Zip>

CERTIFIED MAIL
0000 0000 0000 0000

Subject: <Insert PI Case Number>

Dear Provider:

The North Carolina Division of Medical Assistance ("DMA") Program Integrity Unit and its authorized agents periodically conduct announced and unannounced audits and post-payment reviews of Electronic Health Records incentive payments in order to identify program abuse and overpayment(s). In accordance with 42 CFR § 495.368, States must comply with Federal requirements to ensure the qualifications of the providers who request Medicaid Electronic Health Record (EHR) incentive payments, to detect improper payments and to take corrective action in the case of improper payments to providers.

A post-payment review of your Electronic Health Records incentive payment paid for <insert FDOS> to <insert TDOS> was recently completed. The results of the post-payment review revealed program abuse including but not limited to the following:

<INSERT DETAILED SUMMARY, INCLUDING CITATION OF ALL APPLICABLE STATUTES, RULES, REGULATIONS, POLICIES, MANUALS, ETC. USE INITIALS WHEN REFERRING TO SPECIFIC MEDICAID RECIPIENTS>

<insert DMA Program Integrity Section or Vendor name> has tentatively determined that you received a total Medicaid overpayment in the amount of $<insert $ amount> as a result of these error findings. Attached is a detailed chart which identifies the reason the incentive payment was found to be improperly paid.

You may request a reconsideration review of this tentative decision in accordance with 10A NCAC 22F .0402. The request for reconsideration review must be submitted within 15 business days of receipt of this letter. If you choose to request a reconsideration review, please return the enclosed request form to:

www.ncdhhs.gov • www.ncdhhs.gov/dma
Tel 919-855-4100 • Fax 919-733-6608
Location: 1985 Umstead Drive • Dorothea Dix Hospital Campus • Raleigh, NC 27603
Mailing Address: 2501 Mail Service Center • Raleigh, NC 27699-2501
An Equal Opportunity / Affirmative Action Employer

Rev 1 | Issued 012913
EHR TNO PI Non-Extrapolation

Chief Hearing Officer
DHHS Hearing Office
2501 Mail Service Center
Raleigh, North Carolina 27699-2501

Attention PI Case #: <Insert PI Case #>

You may submit written documentation for review. You have no less than thirty (30) calendar days to submit additional documentation for review that was not provided at the original audit. Following reconsideration review, you will be notified in writing of the final decision.

If you do not request a reconsideration review within 15 business days of receipt of this letter, or if you disagree with the reconsideration review decision, you may file a petition for a contested case hearing with the Office of Administrative Hearings (OAH) in accordance with G.S. § 150B-23(a). You have sixty (60) calendar days from either the date of this letter (if you do not request a reconsideration review) or the date of the reconsideration review decision to **file** a contested case petition with the OAH. Petition forms are available on the OAH website at http://www.ncoah.com/forms.html. There may be a fee associated with filing a petition at OAH. If you have questions about the OAH appeal process or the filing fee, OAH can be reached directly at (919) 431-3000. You **must** file the contested case petition form with the Office of Administrative Hearings, either in person at 1711 New Hope Church Road, Raleigh, NC 27609, by mail at 6714 Mail Service Center, Raleigh, NC 27699-6714 or via facsimile or electronic transmission in accordance with 26 NCAC 03.0101(c) **and** mail a copy to Legal Counsel, NC Department of Health and Human Services, 101 Blair Drive, Raleigh, NC, 27603.

In accordance with 10A NCAC 22F .0402(e), unless a request is filed at the Office of Administrative Hearings within the time provided, the reconsideration review decision shall become the Department's final decision.

Pursuant to 42 CFR 433 Subpart F, DMA must collect all overpayments made to Medicaid providers in order to receive full federal financial participation for the NC Medicaid Program. Within 30 days from the date this overpayment becomes final pursuant to N.C.G.S. §108C-2(5), you must send a check in the amount of $<insert $ amount> (or the amount specified in the decision, if any) to:

Office of Controller
DMA-Accounts Receivable
2022 Mail Service Center
Raleigh, North Carolina 27699-2022

Attention PI Case #: <Insert PI case #>

To assure your payment is properly credited, please enclose the attached payment form with your check. You may also request that the overpayment be recovered from claim payments, or you may request approval for a payment plan not to exceed 24 months.

PLEASE NOTE: The Department is not required to approve requests for payment plans.

In accordance with N.C.G.S. §105-241.21 and as required by N.C.G.S. §147-86.23, a late payment penalty will be assessed and monthly interest will begin to accrue 30 days from the date this overpayment becomes final.

Any communication about this matter should be with the Division of Medical Assistance, Program Integrity Section. **Do not, under any circumstances, request that HP Enterprise Services adjust for the amount or items identified here as this could result in duplicate recoupment.**

If you have questions about this Notice, please call <Insert Name> at <Insert Phone Numer> or by fax at <Insert fax number>.

Sincerely,

<Insert Name and Title>
<Insert DMA Program Integrity Section or Vendor Name>

Enclosures

cc: Accounts Receivable Section
Program Integrity Assistant Director

****PLEASE ATTACH THIS TO YOUR REFUND CHECK****

TO: Office of Controller
DMA-Accounts Receivable
2022 Mail Service Center
Raleigh, North Carolina 27699-2022

ACTION: ____ Payment is attached.

____ I request that this overpayment be withheld from my future Medicaid claims payments.

The assessment of penalty and interest begins thirty (30) days from the date the overpayment becomes final.

NOTE TO PROVIDER: Please attach a copy of the Adverse Findings chart for proper credit.

SIGNED: _____

DATE: _____

FOR: DMA Program Integrity Section or Vendor Name: insert Section Name

Provider Name: insert Provider Name

Medicaid Provider Number: insert Medicaid Provider Number

Program Integrity Case Number: insert PI Case #

nvestigator: insert Investigator name

Notice of Overpayment Amount: $insert $ amount

Revised Overpayment Amount after Reconsideration Review: $_____ (attach copy of review decision)

ATTENTION PROVIDER: Any communication about this matter should be with the Division of Medical Assistance. Do not, under any circumstances, request that HP Enterprise Services adjust for the amount or items identified here, as this could result in duplicate recoupment.

REQUEST FOR RECONSIDERATION

This request must be received by the DHHS Hearing Officer no later than **15 business days** from the receipt of the notification letter. Please include a copy of the notification letter with your reconsideration request. You may submit as much documentation as necessary. If you choose to submit documentation by fax to the DHHS Hearing Office at (919) 814-0032 please limit the documents to 10 pages or less.

If you have any questions about the reconsideration, please call the DHHS Hearing Office at (919) 814-0090.

IMPORTANT: **The DHHS Hearing Office must receive your request by 5pm on the date it is due.**

I hereby request a reconsideration review of the overpayment identified. I prefer the following type of review (please check one):

_____ Paper (attach any additional documentation you wish considered)

_____ Personal (by scheduled telephone conference call)

_____ Personal (I understand this will be held in Raleigh)

Print Name: _____

Signed: _____

Date: _____

Telephone: _____

MAIL TO: **Hearing Office**
Department of Health and Human Services
2501 Mail Service Center
Raleigh, North Carolina 27699-2501
Facsimile (919) 814-0032

RE: DMA Program Integrity Section or Vendor: insert Section Name
Provider Name: insert Provider Name
Medicaid Provider Number: insert Medicaid Provider Number
Program Integrity Case Number: insert PI Case #
Investigator: insert Investigator name
Overpayment Amount: $insert $ amount
Date of Notice of Overpayment: insert date

Appendix 21 - Denial for EHR Incentive Program Payment

NC-MIPS
CSC EVC Center

P. O. Box 300020
Raleigh, NC 27622-8020

For certified /overnight mail only:
2610 Wycliff Road, Suite 102
Raleigh, NC 27607-3073

Today's Date

Provider Name: **Enter number**
Certified Mail #: **Enter number**

ETN: **Enter number**
Provider Number: **Enter number**
NPI: **Enter number**

Enter EP/EH's Name (and Title if Individual)
Attn: Name of Contact Person
Enter Address
Enter City, State and Zip Code

Re: Denial for EHR Incentive Program Payment

Dear Provider:

In response to your attestation dated , the Division of Medical Assistance (DMA) has denied your request for a Medicaid EHR incentive payment in the amount of $amount. Your request is being denied because (insert the reason for denial). Reason inserted in here would be as follows:
the medicaid provider number referenced above has been terminated due to an undeliverable accounting address on record. Therefore, you fail to meet EHR program eligibility pursuant to **42 CFR § 495.304**.
Please visit http://www.nctracks.nc.gov/provider/index.html for information on reenrollment.

If you disagree with this decision, you may request a hearing within fifteen (15) working days of the date of this letter by submitting a request to:

Chief Hearing Officer
DHHS Hearing Office
2501 Mail Service Center
Raleigh, North Carolina 27699-2501
Fax: 919-715-6394

You may request a telephone or personal hearing. You may also submit written documentation for review. The documentation must be received within fifteen (15) working days from the date of this letter in order to be considered. If you request a personal hearing, the hearing will be scheduled in the DHHS Raleigh office. Following reconsideration review, you will be notified in writing of the decision.

If you do not request a reconsideration review or if you disagree with the reconsideration review decision, you may file a petition for a contested case hearing with the Office of Administrative Hearings (OAH) in accordance with G.S. § 150B-23(a). You have sixty (60) calendar days from the date of this letter or the date of the reconsideration review decision to **file** a contested case petition with the OAH. Petition forms are available on the OAH website at http://www.oah.state.nc.us/forms.html. There may be a fee associated with filing a petition at OAH. If you have questions about the OAH appeal process or the filing fee, OAH can be reached directly at (919) 431-3000.